



CREATE

Canterbury Research and Theses Environment

Canterbury Christ Church University's repository of research outputs

<http://create.canterbury.ac.uk>

Copyright © and Moral Rights for this thesis are retained by the author and/or other copyright owners. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder/s. The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given e.g. Holmes, J. (2016) The collapse and resurrection of the Anglo-American nuclear relationship, 1945-1958. M.A. thesis, Canterbury Christ Church University.

Contact: create.library@canterbury.ac.uk



TITLE OF THESIS

**The collapse and resurrection of the Anglo-American nuclear relationship,
1945-1958**

By

John Michael Holmes

Canterbury Christ Church University

**Thesis submitted
for MA by Research**

Year 2016

Table of Contents

Abstract	3
Introduction	4
The post war situation	7
Positive Vetting and the Committee of Subversive Activities	13
The Committee of Positive Vetting	19
The Tripartite proposal	23
A change of Government	29
A third nuclear power	34
Nuclear deterrence and Slessor	38
The 1954 Atomic Energy Act	42
1955, the beginning of the new relationship	47
Geneva, Suez and the degradation of relations	49
The RAF and the USAF, a lifeline to cooperation	58
The end of the road: Operation Grapple and the 1958 Mutual Defence Treaty	62
Conclusion: An independent Deterrent?	68
Bibliography	73

Abstract

This thesis offers a fresh analysis of the Anglo-American Nuclear relationship between 1945 and 1958, with a heavy emphasis on the efforts made by the British over this period to not only re-establish this relationship but also to create and maintain their own independent nuclear deterrent. The thesis argues that the efforts undertaken by the British in establishing this relationship permeated and altered all aspects of Great Britain's policy making, including domestic policy. Moreover, it places a significant priority on the impact of major treaty alterations, including the McMahon Act of 1946, the Atomic Energy Act of 1954 and most crucially the Mutual Defence Treaty of 1958. However, that these developments were independent of other significant factors is not the case, the thesis debates the effects of international events on the pursuit of this policy and even its assistance in re-establishing this nuclear relationship. Yet, this thesis does not rely heavily on secondary sources in areas outside of the Geneva accords and the Suez crisis, choosing instead to offer a re-examination of the primary documentation concerning the development of this relationship. This is due to the use in this thesis of recently released and previously unseen documentation relating to the Mutual Defence treaty of 1958. It is this documentation that suggests a far earlier compromise of Great Britain's independent deterrent, if it ever existed at all, to American influence. Therefore, new perspective of related primary information was required to incorporate the ramifications of this newly released information. This thesis concludes that the Anglo-American Nuclear relationship, while returning from its death in 1946, returns a biased relationship and one that ultimately causes the British pursuit of an independent deterrent to end completely.

Introduction

The British Empire, and therefore, Britain's world influence was certainly the dominant force in World politics precluding the Second World War. After all, the expression 'The Sun never sets on the British Empire'¹ was hardly an exaggeration, its Empire outclassing its rivals in area, wealth and prestige. From the end of the Seven Year's War with France in 1763, Great Britain had been able to claim such a title, but with the growth of its Empire, came the difficulties of its management, the sheer expanse of its borders meant that British policymakers had to maintain a technological parity if not outright superiority or loose areas to her rivals, being simply unable to commit the appropriate forces to deal with the challenges without inviting further calamities in other regions. Even at the end of the Napoleonic wars, Great Britain continued its superiority, its prestige nothing but enhanced by the twenty years of hard fought warfare and its coffers certain of replenishment from her Empire. In this instance and in others, Great Britain had continued its technological parity, yet, with the outbreak of the Second World War, all of that changed. The rapid advancement of technology and the draining cost of the war outstripped the British ability to stay ahead, arguably falling behind as an Empire for the first time in almost two-hundred years. Most prevalent of all, air power had outstripped the essential nature of sea power that the British Empire had built itself upon, and in addition to this crippling change, the development of the atomic weapons at the end of the war ensured that an Empire of such vast size could no longer be defended on all fronts. Moreover, with the Empire either crumbling before the eyes of policymakers, or dismantled in advance of rebellions in the hopes of maintaining a useful relationship, Great Britain no longer possessed the Empire to replenish its damaged economy. Furthermore, the British Government, keen to maintain their World Power status, began

¹ This term is often attributed to Christopher North (pseudonym of Scottish Author John Wilson), Jan, Morris, *Farewell the Trumpets*, (London, Faber, 1978) p.2.

to pursue a policy that would not only maintain this position at the top table of nations but do so at an acceptable cost to the economy; nuclear weapons. Therefore, at the end of the Second World War, Great Britain, in desperate pursuit of their lost technological edge and crumbling World Power, undertook a policy of creating an independent deterrent from which it could exert its will, and the means to achieve this was via the Anglo-American nuclear relationship.

The evolution of this relationship is undoubtedly one of the most crucial alliance developments of the 20th century. Yet, this alliance, crucial to the British, had all but died at the end of the Second World War despite its clear and world changing results. What would follow this collapse is a period of nearly one and a half decades in which the Anglo-American nuclear relationship did not exist in any meaningful way. Great Britain spent this time, rebuked as it had been the creation of the McMahon Act in 1946, pursuing the resurrection of this relationship, not only as a natural means to continue the close cooperation the two nations had experienced throughout the wartime period, but also as a calculated political aim to achieve a simple target; the maintenance of Great Britain's position as a World Power. The creation of the McMahon Act in 1946 by the USA, forbidding their nation from exchanging nuclear information with any foreign power, dictated, until its revocation in 1958, Great Britain's major nuclear aims. This is of course in spite of the existence of the Hyde-Park agreement that guaranteed the continuation of this wartime alliance in nuclear related matters. Therefore, it is necessary to examine the immediate post war adaptations of Great Britain in pursuing such a relationship, including its support for those UN motions that would grant it access to nuclear technology and to withhold its support on those motions that would monopolise the technology to any one party. In addition, Great Britain's own domestic policy would bear significant weight in this early post war period, mainly due to the fear of enemy espionage in nuclear fields and will be discussed. However, these logical adaptations to maintain British nuclear secrecy, cut off as it was from American technology, would eventually also be pursued in a series of efforts to appease the Americans and convince them that their own system was secure and could harbour the pursued American research safely. What would follow in this period until 1958 is a series of military negotiations, technological advancements by all concerned parties and crucial international developments that would all lead to the creation of the Anglo-American

Mutual Defence treaty. It is this treaty that marks the true continuation of an Anglo-American Nuclear relationship after this period of deadlock lasting nearly one and half decades.

Therefore, this thesis at first will focus on the immediate post war effects on the Anglo-American nuclear relationship, in particular the McMahon Act and its international impact. From here it is crucial to analyse the original documentation concerning the conclusions and reactions of British Government officials to this American policy. Furthermore, the McMahon Act, mentioned previously, severely crippled and simultaneously encouraged Great Britain's signature policy of the mid twentieth century, the maintenance of its World Power status via the creation of an independent nuclear deterrent; with or without American assistance. To examine this pursuit, British efforts to safeguard their nuclear advancement from atom spies must be discussed and in detail, including the efforts of the British Committee of Subversive Activities in safeguarding the British Civil Service from Communist infiltration. Yet, it is in this same policy that the first signs of British desire to appease the Americans emerge, certainly in an effort to secure quick access to their nuclear technology and avoid the costly expense of conducting nuclear weapon research independently. From here, the four major themes of this analysis can be identified, the first being the development and pursued efforts of the British Government in appeasing their American allies for rapid access to nuclear technology. The second is the effects of the international stage on the efforts of the British in achieving their previously discussed aim, a significant emphasis being placed on the Korean War, the Geneva Accords of 1954 and of course, the Suez Crisis of 1956. The third such aspect is the development of military thinking between the USA and Great Britain, as well as the advancement of nuclear technology by all worldwide parties, including the development of the thermonuclear device. The final aspect of this analysis lies in the creation of major treaties that would affect, alter and eventually revoke the McMahon Act of 1946. Therefore, the 1954 Atomic Energy Act will play a crucial part in understanding the military negotiation's that would occur from 1954 and continue despite political difficulties during the Suez Crisis, until 1958. Yet, it is the 1958 Mutual Defence Treaty, considered the resurrection of this nuclear relationship between Great Britain and the USA that the greatest emphasis must be drawn due to. This treaty, originally considered the successful continuation of the wartime alliance, now suggests, with the

addition of newly released sections, that this treaty did not mark the continuation of the old wartime alliance, but the creation of a more biased relationship in which Great Britain abandoned her primary aim of an independent nuclear deterrent likely due to her crumbling ability to maintain world power status.

Furthermore, with the exceptions of Geneva and the Suez Crisis, this analysis will rely significantly on primary source material, choosing to make use of such documentation in an effort to reassess this period of build-up that would lead to the Mutual Defence Treaty. This decision is primarily to make effective use of newly released documentation that of course current secondary sources are incapable of applying to their own analysis and conclusions. The exceptions of Geneva and Suez is due to these two international events having an influential role on British thinking that largely remains unchanged with the additions of this new documentation and therefore, the wealth of secondary source material is appropriate. Therefore, a fresh perspective and understanding had to be drawn from the beginning of this time period, via primary rather than secondary documentation. Through such an analysis, the significance of this new information, accessed via a FOI request, to the discussion of the Anglo-American nuclear relationship, and British history as a whole can be assessed independently of prior analysis

The post war situation

The Second World War forged Great Britain and the United States of America into closer military, economic and all round international partners. However, in one particular field, the Anglo-American relationship became rocky after the end of the war, nuclear technology. The Anglo-American nuclear relationship, which had begun on the 19 August 1943 at the signing of the Quebec Agreement², continued rather smoothly throughout the remainder of the war and only suffered a single disturbance due to a later

² The Quebec Agreement was signed by Prime Minister Winston Churchill and President Franklin D. Roosevelt to join the previously established theories and research of Great Britain's own nuclear project 'Tube Alloys', with the industrial and scientific capabilities of the United States; a capacity that the British Empire was unable to provide at this time due to the requirement of its ongoing war across the world.

repealed secret agreement between the UK and Hans Val Halban³. The result of this relationship was the production and successful detonation of the world's first atomic weapon at New Mexico's Alamogordo Bombing and Gunnery Range on the 16 July 1945. What followed shortly was the nuclear attacks on the Japanese cities of Hiroshima and Nagasaki on the 6th and 9th of August respectively. From here on, one might have assumed the Anglo-American nuclear relationship was cemented in the success of those bombings; however, it was not to be.

The collapse of the Anglo-American nuclear relationship was twofold after the end of the Second World War. The first blow was the failure of the Baruch Plan, a proposal introduced by the USA at the first meeting of the United Nations Atomic Energy Commission (UNAEC)⁴, with this failure, international control of nuclear material was impossible, preventing the creation of an international agreement on the technology. The report itself was largely based on the Acheson–Lilienthal Report which had been commissioned by Truman to set forth the USA's approach to atomic energy for the UNAEC⁵. The plan itself set out a few key principles, including the disarmament of the world's current weapons of mass destruction⁶. It is noteworthy, that the Baruch Plan would not have hindered Great Britain's pursuit of nuclear materials or technology for peaceful purposes. It would have of course ended any chance of Great Britain developing the bomb. However, it was the intention of the plan to prevent any nation from developing these weapons and therefore would leave Great Britain on an equal footing to other nations.

The plan proposed to do this via the creation of a United Nations department to control

³ This agreement was reached in 1944 between Great Britain and Hans Val Halban and entailed that the UK would share nuclear information with France after the war in exchange for free use on several patents filed by Frédéric Joliot-Curie. The UK later repealed the agreement following protests from the USA quoting agreements within the Quebec Agreement that prevented the exchange of nuclear information without joint consent.

⁴ The UNAEC was established through the first resolution of the UN general assembly on the 24th of January 1946 and tasked to ensure the protection of future states from the dangers of atomic weaponry through inspection and disarmament.

⁵ The Acheson–Lilienthal Report was chaired by Secretary of state Dean Acheson and coordinated with technical advisor David Lilienthal to establish the USA's future nuclear policy. The report gathered the opinions and insights of a series of influential nuclear experts of the time and was heavily influenced by these opinions. Notable figures on this committee were J. Robert Oppenheimer, James Conant, Vannevar Bush, John McCloy and General Leslie R. Groves.

⁶ Rumble, Greville. *The Politics of Nuclear Defence: A Comprehensive Introduction*, 1st ed. (Cambridge, Polity Press, 1985). pp. 8-9, 219, 285.

all sources of radioactive material and technological patents related to atomic energy. This department would then give this technological and scientific information freely, alongside controlled quantities of Uranium to any state that asked for it; so that they may pursue the peaceful applications of atomic energy. If successful, the Baruch Plan would have disavowed the need for a separate Anglo-American nuclear relationship since all materials and control would be under that of the United Nations. Furthermore, the recently elected Attlee Labour government carefully considered the implications of the Baruch Plan and went so far as to suggest certain edits to the proposal, including an enhanced wording for the prevention of a nation state being protected from prosecution via the use of its veto⁷. The lack of such a control measure would have rendered the Security Council immune to this proposal (The United Kingdom, The United States of America, The Union of Soviet Socialist Republics and France).

Conversely, from the same Cabinet records we can establish that the Labour Government had some concerns over the implications of supporting this policy. Firstly, there was a concern that establishing this international control would 'be prejudicing our chances of obtaining special privileges from the Americans'⁸; an unsurprising but important fact that the British were attempting to continue the relationship that had existed during the Second World War. Secondly, in the same document, the Prime Minister Clement Attlee indicates that despite these aims (of obtaining special privileges), the major interest was to secure a satisfactory system of international control (of nuclear technology). While at the same time indicating that if the proposals fell through it would not be the policy of Great Britain to 'Acquiesce in an American monopoly (of nuclear related material)⁹'. In this regard it is clear that the British Government was keen to access all nuclear related material in whatever agreement they could come to partake in or organise. This unyielding pursuit was certainly down to the revolutionary nature of atomic weaponry and Great Britain's desire at the time to remain a major World Power, a position they now believed fundamentally required the possession of the atom bomb.

However, there was one crucial issue for the Baruch proposal. Notably, despite the

⁷ Gen75/14th Meeting, P.2, Clause 4.

⁸ Gen75/16th Meeting, Cabinet Atomic Energy, 16/12/1946, p.1.

⁹ Ibid., p.1.

Americans offering to destroy their atomic weapons to allow the introduction of the proposal, the USSR was unwilling to allow unrestricted inspection of its country to prevent the development of new atomic bombs¹⁰. With this came the stalling of the proposal in 1947 and its eventual drop in 1948, the lack of any international control ensuring the Cold War nuclear arms race began. The second issue that ensured the collapse of the Anglo-American nuclear relationship was the Atomic Energy Act, also known as the McMahon Act of 1946¹¹. When this Act was signed into law in January 1947 by President Harry S. Truman it fundamentally changed Great Britain's relationship with her wartime partner. The McMahon Act placed the American development of industrial and military nuclear technology under civilian control, rather than the military. Now, this in itself would have not been an issue for Great Britain or the Anglo-American nuclear relationship but for section ten of the Act. Section ten stated that all nuclear information was secret from inception and could only be declassified by the Atomic Energy Commission, under which all nuclear research in the USA must be pursued. This meant that any foreign nation, including the UK and Canada, the USA's former wartime allies, would not have access to the scientific or military information that the USA currently or in the future, might possess; thereby ending all previous nuclear agreements between the USA and her partners¹².

This cessation of cooperation by the USA on nuclear matters caused a political upset in Great Britain, who had presumed that cooperation would continue post war, as it had during the war. This was due to the existence of the Hyde Park Agreement, a secret agreement between President Roosevelt and Prime Minister Winston Churchill. This agreement was jointly entered into by Churchill and Roosevelt on the 18th of September 1944 cementing the foundations of what was supposed to be the post war Anglo-American nuclear relationship. Significantly clause two of the agreement stated

¹⁰ Sarell E, Gleason et al., 'Memorandum by The United States Representative on the Atomic Energy Commission (Baruch) to President Truman', *Foreign Relations of the United States, 1946, General; the United Nations: Volume I*, (Department of State. Bureau of Public Affairs, U.S. Government Printing Office, 1972) pp.921-925.

¹¹ The McMahon Act was introduced by Brien McMahon on the 20th of December 1945 as a substitute for the May-Johnson Bill had had failed to pass through Congress and the Senate due to scientific opposition of continued military control of nuclear matters.

¹² James D, Nuse, 'Legislative History of the Atomic Energy Act of 1946 (Public Law 585, 79th Congress)', Atomic Energy Act of 1946 (Public Law 585, 79th Congress), Vol 1, (U.S Atomic Energy Commission, Washington, 1965), Section 10, point A1-2, B1. pp.12-13.

'Full collaboration between the United States and the British Government should continue after the defeat of Japan unless and until terminated by joint agreement'¹³. Yet, the creation of the McMahon Act actively ended the joint relationship without consent from Great Britain, effectively rendering the document null and thoroughly demonstrating Great Britain's declining World power, being so easily pushed aside by the USA. However, this scandal was not deliberate in nature; the Hyde Park Agreement was never shown to any of Roosevelt's advisors and remained unknown to the Americans until the British furnished a copy for them. They continued to question its authenticity until their copy was finally located¹⁴, having been miscategorised under Tube Alloys¹⁵.

Conversely, if the Americans had known of the existence of the Hyde Park agreement, it may not have prevented the creation of the McMahon Act. The fact the McMahon Bill was passed by the USA Senate shortly before the Baruch proposal was introduced to the UNAEC would suggest at first, a contradiction of words by the USA. By taking all atomic research and information away from the USA military (which would be compelled to respond to any request of the Government) and placing it under civilian control. The USA was seemingly separating its ability to provide the United Nations with the information it had pledged under the Baruch proposal. However, within the Baruch Plan was a requirement, that while national authorities may exist within the proposed international system of control for atomic energy, it was required that they be subservient to the UNAEC¹⁶. Thereby, the American Atomic Energy Commission (AEC) would have to exchange all of its nuclear information classified under section ten of the McMahon Act, to the UNAEC; which would then share it in the interests of world peace. Therefore, it can be argued that the USA was pre-emptively shifting this control of nuclear information away from the military in an effort to appear genuine with its promise to destroy its nuclear arsenal when certain conditions within a system of international control were met. Unfortunately, with the abandonment of the Baruch Plan in 1948 and the onset of the nuclear arms race between the USA and The Union of Soviet Socialist

¹³ The first clause of the Hyde Park Agreement stated that the issue of international control of these weapons was not accepted and that when available, the bomb should be used on Japan; who were to be warned of its deployment. The third clause concerned itself with sealing potential information leaks within the Manhattan project.

¹⁴ Kenneth D. Nichols, *The Road to Trinity*, (New York, Morrow, 1987). p.17.

¹⁵ Richard, Gott, 'The Evolution of the Independent British Deterrent.' *International Affairs (Royal Institute of International Affairs 1944-)* 39, no. 2 (1963) pp.238-52.

¹⁶ Bernard Baruch speech to the UNAEC, 14th June 1946, suggested measure 14.

Republics (USSR), Great Britain found itself without an international system of control for nuclear technology, and a United States that could not exchange its technology without it being declassified by a civilian authority; an action it was unwilling to do. Moreover, it is likely an action that would have been difficult to accomplish due to the nature of the USA Government construction, consisting on executive Branch (The President), a Legislative Branch (United States Congress) and the Judiciary (The Supreme Court); with the ability to declassify this information now lay with Congress, such policy decisions were not available to the President without public debate.

What followed from the onset of the nuclear arms race was a fundamental rethink of military planning by the USA and other world powers, including Great Britain and the USSR. This technological upset caused by the development of the atom bomb was akin in effect but grander in scale than the arrival of the aircraft carrier to naval combat during the Second World War. As a result of this advancement, the battleship became obsolete as the main tool of naval warfare, the aircraft carrier outclassing it in every conceivable fashion; the atomic bomb did this but on an unprecedented scale. Previous military assumptions about everything from the safety of naval outposts to the aerial defence of civilian areas was thrown into question, never in human history had a weapon of such devastating effect been developed.

With the failure of the Baruch proposal, the USA found itself in the position as the only atomic power on Earth, a position it used to support its own international agenda. However, with this failure and the unprecedented need to possess this weapon, several former world powers, including Great Britain, were keen to develop this technology for their own benefit, with or without American assistance. Of course, Great Britain was keen to gather the support of the Americans in whatever way it could, to stabilise its own faltering world power status. It is worthwhile to note however, that in many terms, the USA was somewhat unwilling to assist the British in this endeavour for reasons beyond the limitations of the McMahon Act. Most notable of these was the unavoidable competition these two powers would engage in if left on an equal footing. Great Britain was a World Power and while its power was waning long before the end of the Second World War, it still possessed a great deal of power and influence in the world. More than enough to cause headaches for the USA Government which was keen to maintain its

overwhelming advantage in international relations, the atomic monopoly.

However, the British determination to develop this weapon, this advantage was such, that it dedicated itself to building its own, independent deterrent. It was a common fear as the end of the Second World War that a nation might be 'Pearl Harboured' by atomic weapons, thereby removing its ability to retaliate, defend itself and cause mass casualties all at once. In November 1945, the director of intelligence at the Air Ministry warned that 'If we are going to be attacked by a major power, I have no doubt that the attack will be exactly of this nature'¹⁷. The revolutionary advancement that this technology represented meant there was no counter to it, no strength of armies or size of navies would matter if atomic weapons were possessed by one side and not the other. This could not be evaded in any regards; it was not the failure of intelligence or a lapse in defence protocol that would allow for this type of attack, it was unavoidable. But arguably more important was the connotations of the Director's quote, 'a major power', not the USA, but a major power. This indicates that Great Britain believed wholeheartedly, that other powers in the world were racing to develop this weapon first and while the competition from other nations was undesired, Great Britain might have an advantage if it could re-establish its wartime alliance with the USA. Therefore, many of its major policy decisions over the course of the Labour governments of 1945-1951 were based in two camps, the security of its own nuclear research and deterrent and its appeasement towards the Americans in the hopes of gaining nuclear secrets. To continue, one of the most crippling issues for the British efforts to secure a renewed Anglo-American nuclear alliance was their separate approach to international relations in terms of the application of policy to said partners. The Americans compartmentalised their relations differently, they viewed intelligence cooperation and nuclear relations with Great Britain as wholly different issues and the efforts or success of one would not necessarily have an effect on the other. Whereas, the British often considered them connected and would often pursue appeasement of policies in other sectors, such as positive vetting, to entice the Americans into reconsidering their previous stance on atomic cooperation. This lack of mutual understanding can largely be blamed for what was, as a whole, a frustrating period for policy makers and is somewhat similar to the

¹⁷ Richard J, Aldrich, 'British Intelligence and the Anglo-American 'Special Relationship' during the Cold War.' *Review of International Studies* 24, no. 3 (1998) pp. 331-51 (p.331).

misunderstandings between the West and the Soviet Union in its post Second World War settlements.

Positive Vetting and the Committee of Subversive Activities

In regards to positive vetting, the issue was a major hurdle for the British Labour Governments from 1945 to 1951. After the Second World War it was clear that strong security measures would be required to secure secret information from Communist espionage, especially nuclear information. However, the British system had always been a negatively vetted system, but through the late 40's and early 50's pressure grew considerably to develop a more 'positive' model. These alterations to British tradition in regards to secret work form the foundation of Britain's attempts to renew the Anglo-American nuclear relationship. The differences between positive and negative vetting are as follows; negative vetting does not make deeper inquiries as to an individual's background or history unless their name provokes a response on the 'watched list' of the Security Services, for example, if they were a member of the Communist party. Positive vetting however, makes these deeper inquiries regardless of anything else, individuals will give their family history, origins, political affiliations and other normally considered irrelevant facts and personal information. In addition the individuals family and friends are often the target of police questioning in regards to the individuals personality and behaviour patterns (without the subject in question being aware of this). Furthermore, the pressures on Great Britain to implement some sort of change did go beyond the desire to appease the Americans, it was also rooted in the Canadian spying ring that was discovered due to the actions of Igor Sergeyevich Gouzenko in late 1945. Igor, a Russian cipher clerk for the Soviet embassy in Ottawa, Canada, chose to seek asylum in Canada due to a variety of domestic issues within the Soviet Union¹⁸. To persuade the Canadians to accept his claim, Igor stole several code books and other crucial documents from the embassy he worked in; these documents revealed a large spying ring within Canada. Many of these spies had operated within the Manhattan project. This event revealed serious failings within the Security Services for all of the wartime partners. That such a large group of spies, many of whom were

¹⁸ At the time, the USSR was suffering from a notably poor economy and a failing education system.

connected to the previously thought, secure, Manhattan project, had not only existed, but had functioned successfully for a considerable amount of time shocked the Government. This led to a fundamental rethink in Great Britain on the effectiveness of their vetting system, especially with so much at stake to develop these weapons.

Therefore, the British created the 'Committee of Subversive Activities'¹⁹, a committee of experienced ministers and Civil Servants to discuss and advise the Government on its policy matters relating to the processing of delicate posts and the use of vetting, both positive and negative. Within these committee reports are a variety of proposals, considerations and counter proposals addressing issues from the breadth to which positive vetting can be applied, to the impact of such a dramatic shift in British tradition on its relationship with the United States of America. The files themselves directly reference the Canadian Royal Commission known as Kellock–Taschereau Commission²⁰ in their initial meeting and discuss in depth the Working Party Report 'The Employment of Civil Servants ETC exposed to Communist Influences'²¹. Within the Working Party Report, the implications of the Alan Nunn May spying scandal²² mentioned in the Canadian report are discussed. In all, these collected reports left the Committee of Subversive Activities in a difficult position, the Working Party report made it clear that the employment of Communists within the Government could not be allowed to continue as it was impossible to separate 'the sheep from the goats'²³ and that these individuals (Communists) had in the past complied with requests for espionage despite clearly

¹⁹ The first meeting of this committee took place on: 16/06/1947. CAB 130/ad hoc/GEN 183, 'The Committee of Subversive Activities',

²⁰ The full title of the royal commission is as follows: 'The report of the Royal Commission Appointed under Order in Council P.C. 411 of February 5, 1946 to investigate the Facts Relating to and the Circumstances Surrounding the Communication, by Public Officials and Other Persons in Positions of Trust of Secret and Confidential Information to Agents of a Foreign Power.' The investigation was headed by two supreme court judges justice Robert Taschereau and Justice Roy Kellock.

²¹ The report was published 29/05/1949 by the Working Party.

²² Alan Nunn May was a British Physicist who worked on the Manhattan project as part of the Cambridge team. During the war and his time on the Manhattan project he committed acts of espionage for the Soviets. He was implicated by Igor Sergeyevech Gouzenko in his defection and when questioned in 1945, he eventually admitted to espionage. When he was released in 1952 he defined his actions as 'Wholeheartedly concerned with securing victory over Nazi Germany and Japan, and the furtherance of the development of the peaceful uses of atomic energy.'

²³ CAB 130/ad hoc/GEN 183/01, 'The Working Party Report', *The Employment of Civil Servants ETC exposed to Communist Influences ETC*, 29/05/1949, p.5.

knowing it was a criminal act.²⁴ However, despite these clear recommendations, the Committee of Subversive Activities argued that an outright ban on Communists would be unrealistic²⁵ and that, as the Working Party report had also indicated, a double standard system existed in which spies would be prevented from joining the party to allow them to continue their work with less suspicion; thereby making an outright ban useless²⁶. The Committee of Subversive Activities instead argued that 'less sensitive roles' could be found for Communists within the Civil Service, and that such a policy should be done discreetly, or the Communists would claim victimisation²⁷. From this initial decision, the committee discussed several measures to improve the security of the Nation's most delicate information, while still allowing Communists to work within the Government and while avoiding several legal issues that could arise from an ill-conceived policy.

Over the course of the next two years the British Government went through a series of difficulties and policy alterations in an attempt to best address the issue that was Communist infiltration; these efforts being both a domestic effort to improve the nation's security as well as an international effort to appease the United States and improve upon the Anglo-American nuclear relationship. One of the key issues for the Government was the inability to implement a panel system to resolve industrial issues in the same way it had resolved its Civil Service appeals issue²⁸. In regards to industrial security, the major difficulty arose from the Ministry of Defence's employment of private firms on confidential and secret work: the range of employment went from engineers to scientists and beyond. These companies could employ individuals of questionable trust (either due to them possessing the necessary qualifications or due to the individual being a part of a larger workforce, such as welders). This was a clear issue for the government, which could not simply ban Communist leaning individuals outright for a fear of political backlash, judicial challenges and technical complications arising from key scientists who may be

²⁴ Ibid, pp. 1-2

²⁵ CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting one, 16/06/1947, p.1.

²⁶ The Working Party Report, p.2.

²⁷ A point argued quite effectively by the Minister of Labour and National Service in 'Placing in employment of Communists', Memorandum by the Minister of Labour and National service, CAB 130/ad hoc/GEN183/04, 07/03/1949., P. 2.

²⁸ To Allow for a fair system of judgement, the British had created a Civil Service panel that would address issues where an individual's loyalty could be questioned within the Civil Service. This panel having the final say on whether an individual was suitable for secret work.

Communist leaning and essential for such secret work to progress. Because of this, in the early reports on this issue by the Committee of Subversive Activities, it is made clear that an outright ban on Communists is impossible and that any measure must not and cannot become a witch hunt²⁹. This consideration would become particularly relevant due to the detonation of the USSR's own nuclear device six months later on the 29 August 1949, with the outbreak of the Korean War following soon after in 1950. With these events and no stabilised nuclear relationship with the Americans or a fully functioning weapon system of their own, the British found themselves in a position of strategic vulnerability and chose to undertake policy that would not aggravate the USSR³⁰.

An initial solution to the industrial issue was to create a panel along the lines of the Civil Service panel but for the industrial workers. However, there were several key issues with this proposal. Firstly, such a panel would require that a great number of individuals be in possession of sensitive secrets and would be in the position to reveal said secrets at any moment³¹. Secondly, the methods employed by the Security Service would be known on a wider scale and this as a whole was undesirable, but if that information was leaked, then the entire system of the Security Services would be in jeopardy³². However, if the Government employed the Civil Service system without the panel upon the industrial workforce, then it would appear as a purge with no buffer, and a deliberate act of discrimination by the Government, as well as a double standard. Conversely, it was imperative that a system be chosen quickly to safeguard the industrial mechanics required by the Government for the advancement of its atomic technology from Communist infiltration. This same advancement led the Ministry of Defence to believe that (in 1949) 'the stage had now been reached of putting to practical application the results of research over the last 2-3 years'.³³ The pressure to implement this research would only increase with the previously mentioned developments of the USSR nuclear weapons and the Korean War.

Eventually, the Committee of Subversive Activities chose to use the Government's

²⁹ CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting two, 09/03/1949, p.2.

³⁰ Aldrich, 'British Intelligence.' pp. 331-51 (p.339).

³¹ CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting three, 30/03/1949, p.1.

³² CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting three, 30/03/1949, p.1.

³³ CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting two, 09/03/1949, p.2.

'contractual rights' to resolve this issue in a subtle enough manner that it would not provoke a backlash, safeguard the techniques of the Security Services and crucially, that it would appear as a strong decision by the Government to the Americans, that the British were addressing Communist infiltration (an effort that would unfortunately prove moot by the admission of the scientist Klaus Fuchs of Communist espionage in 1950³⁴). The contractual rights allowed the Government to require a company to remove an individual of an 'unsavoury' nature from secret work involved in the contract. This individual could be moved to a less sensitive section of the contract where possible. However, it is acknowledged that such a change may not always be possible and that if no other contracts are appropriate for the said individual, that individual would likely be let go by the company, having no work for them in which they could be employed safely. This is acknowledged as undesirable, but it was agreed that the Government was simply asserting its contractual rights and that any result of the assertion of these rights was between the employer and their employee and not the domain of the Government to comment.³⁵ This allowed the Government to safeguard their projects and remove the possibility of a political backlash or judiciary hearings as was feared at the time.

The next major obstacle for the Government, in its attempts to strengthen its security, came in the classification of its own outstations. The initial recommendation by the Ministry of Defence was that within these outstations, no Communists or Fascists, in line with the Prime Minister's statement of the 15 March 1948³⁶, should be employed within them (the outstations)³⁷. Yet, while the pressure was great to prevent Communist infiltration, the numerical limitations of the Security Services again proved an obstacle for the Government. In addition to this proposal by the Ministry of Defence, the Service Ministry had claimed its entire headquarters as requiring vetting (some 33,000 individuals). This, alongside the 360,000 required if all outstations were declared secret was simply too large of a number to vet for the Security Services, who could, at best, vet

³⁴ Michael S. Goodman, 'Who Is Trying to Keep What Secret from Whom and Why? MI5-FBI Relations and the Klaus Fuchs Case.' *Journal of Cold War Studies* 7, no. 3 (2005): pp.124-46, (pp.130-131).

³⁵ CAB 130/ad hoc/GEN 183/03, The Committee of Subversive Activities, 'Safeguarding secret contracts placed with outside industry by the Admiralty and Ministry of Supply', 21/02/1949, p.3.

³⁶ This statement was given during a House of Commons sitting on the topic of 'certain matters of employment within the Civil Service' by Prime Minister Clement Attlee on the 15/03/1948.

³⁷ CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting four, 10/05/1949, p.1.

2,500 individuals a week. Sir Percy Stilitoe, the representative of the Security Service on the Committee of Subversive Activities indicated this difficulty and urged for a solution, although he did not 'wish to suggest that the extent of the security cover provided by vetting should be substantially reduced.'³⁸ It was quickly suggested that vetting could be limited to more senior Civil Servants as well as scientists, who would encounter secret information on a regular basis and not those who encountered it only occasionally, such as messengers and typists. Moreover, it was proposed that a more 'positive' line of inquiry could be made for these posts (senior Civil Servants and scientists) when they became absent (This is the first true indication of 'positive vetting by the British Government). This type of positive inquiry would involve the use of the police who would inquire with the applying individual's family and friends discreetly and report their findings to the Security Service (MI5). The extent to which a post could be classified as requiring a 'positive inquiry' was left up to the determination of a new committee formed during this meeting, the Committee of Positive Vetting³⁹. This committee of officials, supervised by the treasury with representatives from the Ministry of Defence, the Home Office, the three service departments, the Ministry of Supply and the Secret Service (MI5) were designated with the task of evaluating the impact and use of a 'positive vetting model' and to report these findings back the Committee of Subversive Activities.

The Committee of Positive Vetting

This committee represents a new direction in British Security thinking, brought on by the failure of its previous model. The positive vetting route offered a solution to the British Government that had in the last five years experienced a series of devastating intelligence shocks. First, there had been the Canadian spy ring alongside the discovery of Alan Nunn May as a Soviet Spy, as previously discussed. Secondly, there was the detonation of the Soviet's first atomic bomb in 1949, the detonation subsequently confirmed by the United States and Great Britain in the years 1949 and 1950 respectively. This successful test came four years ahead of the American intelligence

³⁸ CAB 130/ad hoc/GEN 183, The Committee of Subversive Activities, meeting five, 05/04/1950, p.1.

³⁹ Ibid., p.3.

predictions and five years ahead of the British prediction for the Soviet program⁴⁰ and therefore came as a shock to the Western allies. Thirdly, the implication of Klaus Fuchs in Soviet espionage forced the British Government to come to the conclusion that their system was not enough, it had failed in its aims. Fourthly, the outbreak of the Korean War had, as previously mentioned, brought to a head the strategic vulnerability of Great Britain. This combination alone, of the Korean War and the development of the Soviet bomb, likely advanced by the espionage of Klaus Fuchs, 'left the British Chiefs of Staff in a state of shock'⁴¹. Therefore, the shift in Government thinking is not a surprising one. However, the evolution of Government policy did not occur only due to these sudden and striking events, it was affected by a number of growing concerns all linked to Communism. These concerns included the Berlin airlift between 1948 and 1949, which demonstrated the potential for a conflict with the Soviets. Moreover, during this time period, Czechoslovakia fell to the Communists and undoubtedly caused a deal of concern amongst Government officials and the potential for this enemy to extend its grasp, was deeply worrying for them. Yet, the British Government did not react like their American counterparts, who, in 1947 had published a report on 'Un-American Activities' and continued to develop these policies, which in turn contributed to the development of McCarthyism in the USA; at no point did the British adopt such a stance and actively refuted such discussions in Parliament that would lead to it⁴². Of course, when the initial recommendations of the Committee of Positive Vetting arrived, they came with several limitations that set it aside from the American system and even the Canadian system of intelligence security; albeit it lies closer to the Canadian system than the American system. The committee proposed a system of positive inquiry into the loyalty and character of certain key individuals who were deemed to be in positions of significant risk. The full definition being;

'Posts to be included on the special list must make the holder privy to the whole of a vital secret process, equipment, policy or broad strategic plan, or to the whole of an important section of that process, equipment, policy

⁴⁰ Richard Aldrich and Michael Coleman, 'The Cold War, the JIC and British Signals Intelligence, 1948.' *Intelligence and National Security* 4, no. 3 (1989), pp.535-49, (pp.535-538).

⁴¹ Aldrich, 'British Intelligence.' pp. 331-51 (p.333)

⁴² Peter Hennessy, and Gail Brownfeld. 'Britain's Cold War Security Purge: The Origins of Positive Vetting.' *The Historical Journal* 25, no. 04. (1982). Pp. 965-973 (pp.965-966).

or plan, where disclosure would be of crucial value to an enemy or potential enemy strategically or politically.⁴³

This definition is significant in that it removes over 90 percent of the atomic workforce from its parameters, leaving only the scientists in charge of these projects alongside key engineers, operational staff, cipher and clerical positions who would undergo positive inquiries. In all, the Committee of Subversive Activities estimated that a total of 200 such posts existed (that required positive vetting). The Committee of Positive Vetting placed the number after consultation with Government departments at 700-720 and while this is significantly higher than the original estimate, it was viewed as within logistical means and to alter the policy in any way to reduce this number would only harm the effectiveness of the policy. By limiting the positive inquiries in this way, the committee not only hoped to maintain the logistical capability of the policy, but also to grant it a few key strengths. Firstly, that it can remain a secret of the utmost importance, it would not be a declared policy and the individuals would not be aware of the inquiries being made into their character. It was imperative that such knowledge did not come to light and that the policy remains a secret. Secondly, by limiting the numbers to be positively vetted, the committee was ensuring that these numbers remained manageable for the police force (required for the positive inquiries) to maintain a level of discreetness required for the policy's success. As previously stated, it would remain a secret policy and if the force became overwhelmed by the number of inquiries it was required to undertake, there would be a chance of a less experienced officer being assigned to such a task and thereby risk the existence of this policy emerging into the public eye, or at the very least, alerting whoever was being investigated of these positive inquiries. Thirdly, the definition that would determine whether an individual was positively or negatively vetted (mentioned previously) would encompass the already revealed espionage agents Nunn and Fuchs, who were 'privy to the whole of a vital secret process'. Therefore, it can be concluded that it was the hope of this committee that this would be enough to prevent serious security leaks from occurring again.

To continue, this evolution of British strategic security thinking was not a sudden departure from the previous model, but a slight alteration to it. The British Government

⁴³ CAB 130/ad hoc/GEN 183/08, 'The Committee of Positive Vetting report', 27/10/1950, p.2.

did not abolish their previous system and adopt the American system of vetting (which is a positive system of vetting) for example. This was due to the political and social complications of implementing such a policy. This subtle evolution of policy (the policy suggested by the Positive Vetting Committee) could be kept secret and even if it were eventually revealed, could be defended within parliament, it being only a minor alteration to previous policy and affecting only those individuals in prestigious positions of trust. Moreover, it is mentioned in the following meeting of the Committee of Subversive Activities⁴⁴, that the public at this time saw the realm of 'atomic energy' as a special category and anything associated with it was shrouded in secrecy, thereby placing a special emphasis on its security was acceptable to the public; thereby making the defence of any such policy easier.

However, it is worth noting that this committee (of positive vetting) did consider and compare the American and Canadian system of vetting to the British system in brief. This is entirely down to the British fears that until the Americans believed that their security systems were capable of detecting Soviet agents, a renewed Anglo-American nuclear relationship was impossible. Yet, there was a difficulty for the British Government in that they could not simply adopt the American system due to the constraints of public opinion and the risk of political backlash or even a Commons defeat in an announced policy (at this time the Attlee Government had a majority of just six seats in the House of Commons). The summary of the American system by the Committee of Positive Vetting reflects some of these concerns.

'We understand that the FBI system is extremely elaborate. Before any person is appointed to any Government post in which he would have access to classified information, his name is checked over FBI records and he has to fill in a detailed and lengthy form listing his ancestry and the whole of his previous career, education etc. He is then subject to intense overt police enquiries based on this form. We consider that any such procedure would be repugnant to British thinking.'⁴⁵

In comparison, the Canadian system, also undergoing a change since the Kellock–Taschereau Commission which finished in 1946, was also compared to the

⁴⁴CAB 130/ad hoc/ GEN 183, The Committee of Subversive Activities, meeting seven, 17/08/1951, p.1.

⁴⁵ GEN 183/08, 'Positive Vetting' report, pp. 3-4.

British system by the Committee of Positive Vetting:

'We are informed that the Canadian system lies between the American and that at present employed in this country. Reliance is placed primarily on written records but these are supplemented by field enquiries. The latter are reported rarely to add anything not disclosed by the former.'⁴⁶

It is reasonable to conclude that the British desired a system that detected individuals like Fuchs and Nunn before they could implement serious damage but also did not cause every individual employed within a secret sector to undergo the highest level of invasive security procedures; after all, as is concluded previously, the majority of these field inquiries, these positive vettings, rarely turn up anything unknown. Klaus Fuchs and Alan Nunn May were the exception to the rule, rather than a regular occurrence within the workforce. However, it must be noted that Fuchs and Nunn are not the only Atomic Spies in this period, and are in fact two amongst many⁴⁷. The other Atomic spies, notably the Rosenberg's, served to take some of the blame for the Soviet atomic advancement away from the British. Yet, despite this, Nunn and Fuchs continue to hold significance, Nunn being the first major Atom spy to be revealed post war and Fuchs, whose actions and impact, were described in 1951 by the American Joint Committee on Atomic Energy as

'It is hardly an exaggeration to say that Fuchs alone has influenced the safety of more people and accomplished greater damage than any other spy not only in the history of the United States but in the history of nations.'⁴⁸

The Tripartite proposal

However, the possible use of this system of security was quickly removed as an option

⁴⁶ Ibid., p.4

⁴⁷ Other notable Atom spies from the period include Morris Cohen, Harry gold, David Greenglass, Theodore Hall, George Koval, Irving Lerner, Ethel and Julius Rosenberg, Saville Sax and Morton Sobell.

⁴⁸ Joint Committee on Atomic Energy. Soviet Atomic Espionage. Chapters 2 United States Government Printing Office, Washington 1951. pp.5-6.

for the British Government due to the recommendations of the Tripartite Conference on Atomic Energy Security, conducted between the USA, Canada and Great Britain to ensure closer security relations. At this conference, the British delegation put forward the proposal that 'no one should be given access to classified atomic energy information unless he has passed an open enquiry into his loyalty, character and background.'⁴⁹ This recommendation placed the British in an awkward situation both domestically and internationally as it was forced to reconcile the need to implement this proposal that went against previous domestic decisions or risk upsetting the Americans by going back on the proposal that they had put forward. Now, it is significant that the discussions around this proposal by the Committee of Subversive Activities were surprisingly one sided, it was quickly accepted by the committee that this proposal had to be implemented (under the advice of the Committee of Positive Vetting which had advised on this proposal). The main points of contention came from the need to implement this proposal quickly and to what departments it would be implemented on, rather than whether to implement the proposal at all. This can largely be attributed to the conclusions of the extensive report by the Committee of Positive Vetting on the recommendations of the Tripartite conference, presented to the Committee of Subversive Activities in their meeting⁵⁰.

The report by the Committee of Positive Vetting addressed many of the possible issues and policy contradictions that this proposal by the Tripartite delegation had invoked for the British Government. These issues included but were not limited to political backlash, public scrutiny and international embarrassment. The first such issue addressed by the committee was how the public would perceive the new extensive questionnaire required by the proposals for all applicants to branches of secret work. The committee quickly indicated within their report that the questionnaire, while extensive was largely on 'traditional lines'⁵¹ for British inquiries during the interview process. The only new additions of note were the open declaration that inquiries would be made of third parties and whether the individual had ever been a member of any Communist or Fascist organisation; and while the latter was an issue for some members of the Committee of

⁴⁹ CAB 130/ad hoc/ GEN 183, The Committee of Subversive Activities, meeting seven, 17/08/1951, p.1.

⁵⁰ CAB 130/ad hoc/ GEN 183/12, 'Atomic Energy personnel Security report' by the Committee of Positive Vetting for the Committee of Subversive Activities, written the 15/08/1951 and used by the Committee of Subversive Activities on the 17/08/1951.

⁵¹ 'Atomic Energy personnel security report' by the Committee of Positive Vetting, p.2.

Positive Vetting, it was on the whole, accepted as necessary. However, some of the requirements of the Tripartite proposal did cause issues, mainly in that it was a contradiction of previous British security policy on a grand scale. The two most obvious of these contradictions was that, firstly, this policy would be conducted in the public eye; it was to be an announced policy and therefore defended in the House of Commons when needed⁵². Secondly, that this policy would cover information to which it could safely be concluded was not vital for the security of the state, yet individuals possessing access to this information would have to undergo the positive vetting regardless⁵³. This is a significant departure from the Positive Vetting Committee's own recommendations on the 23 October 1950 which emphasised the need to keep this policy of positive vetting a 'jealously guarded secret'⁵⁴. The committee felt that MPs would be confident in defending positive vetting since it would apply to only a few individuals (under 1000) and in addition to this, it would in no way overwhelm the Security Services with excessive and largely redundant security checks. Both of these defences would become irrelevant (if the policy was accepted). Other issues with the proposal were the difficulties involving contractor's workmen⁵⁵ and an evident contradiction of policy by the Prime Minister who had previously in a public statement limited questions of Communist affiliation to the Civil Service⁵⁶; this new policy would encompass all individuals working within secret branches.

The next major issue for the committee to resolve was whether the proposal could be limited to the atomic energy sector, thereby saving the Security Services from possibly thousands of unnecessary checks, while still maintaining the proposed agreement with the Americans. Some of the defences for such an arrangement include the 'special aura that surrounds anything atomic [in the public eye]'⁵⁷, thereby giving atomic security a special status, and secondly, that 'it is reasonable that we should adopt our procedure to bring it more closely into line with that of our associates (the USA and Canada).'⁵⁸ Yet,

⁵² Atomic Energy personnel security report' by the Committee of Positive Vetting, p.3.

⁵³ Ibid., p.3.

⁵⁴ GEN 183/08, 'Positive Vetting' report, p.2.

⁵⁵ GEN 183/12 'Atomic energy personnel security', p.3.

⁵⁶ GEN 183/12 'Atomic energy personnel security', p.3.

⁵⁷ Ibid., p.4.

⁵⁸ Ibid., p.4.

the committee quickly disregarded these arguments as 'thin'⁵⁹ at their core and even go on to say that 'No thinking person' will believe that atomic secrets are more vital than those of bacteriological warfare, guided missiles, vital politics and defence secrets.'⁶⁰ This leads into the next major point by the Committee of Positive Vetting on this proposed limitation. If the security of the state would be vastly improved by this new procedure⁶¹, then why not apply it to other areas as well? If not, then why are they applying it to the atomic sector?⁶² These criticisms of the suggested limitations to the proposal summarise just a small section of the difficulties that existed for the British Government. The Tripartite proposal could not be substantially edited or moulded to benefit the British Government for a number of reasons beyond that of the atomic energy limitation.

The first and most obvious of which is that it was the British delegation that had made the proposal to the American and Canadian delegations and not a vice versa. This meant that if the British Government substantially edited the agreement or made a counter proposal to the Americans and Canadians, it would present two facts. Firstly, that the British were unwilling to enter into sufficient security arrangements to satisfy their concerns (this is particularly stressed in the case of the USA) but also, secondly, that the British could not coordinate their own Foreign Policy. If they rejected the Tripartite proposal, they would be rejecting their own proposal and this would only serve as a tool for international embarrassment. In essence, the British Government was backed into a corner by its own negotiations and political limitations. If the British Government had attempted to limit the scope of this proposal to atomic energy (despite the recommendations of the committee) then it would be forced to defend this limitation in Parliament (it being an announced policy). The Government would have to state why it would not apply this procedure to the entirety of secret work and as the criticisms of the Committee of Positive Vetting have indicated, it is expected that such a defence would be thin and ineffective. If the Government was defeated in the House of Commons on this proposal (a realistic event considering the governments slim six seat majority) then it would be forced to abandon the policy entirely. Undoubtedly the Government would

⁵⁹ GEN 183/12 'Atomic energy personnel security', p.4.

⁶⁰ Ibid., p.4.

⁶¹ Ibid., p.4.

⁶² Ibid., p.4.

have had to criticise a full expansion of the policy to all secret work as too widespread and of overloading the Security Services with pointless inquiries. Therefore, the Government would have been unable to adopt these criticisms and expand the policy for fear of a political nightmare, having to adopt those measures it had previously dismissed. This would have forced the British Government to drop its own proposal to the Americans, certainly damaging relations as well as the Government's own credibility at home; this was an impossible risk for the British to reconcile with.

Moreover, any alteration to the proposal, major or not, risked upsetting the Americans who were the main target of this domestic policy, the British government were willing to undergo a 180 degree turn on certain security matters because of the possibility of renewed Anglo-American nuclear cooperation. By altering this proposal in any fashion, to any degree, there was a risk that the Americans would view it disapprovingly. Certain aspects of the agreement, such as asking direct questions as to an individual's Communist affiliations were an absolute requirement for the success of this policy in its aims of renewed Anglo-American cooperation. Within the report of the Committee of Positive Vetting this requirement of Communist inquiry with the reconciliation of Anglo-American cooperation is explained in full.

'We want the Americans atomic secrets and we won't get them unless they modify the McMahon Act. Officials have already offered the procedure now proposed and nothing short of that offer – and the direct question to the candidate about Communist associations is from the American's point of view a sine qua non – will secure their cooperation. It is fair to add that, even if we confirm the offer, there is no guarantee that the McMahon Act will be modified and that we will get their atomic secrets.'⁶³

Moreover, the implementation of the Tripartite proposal in full would cause some issues for the British Government that could not be avoided. The most obvious of these was the apparent infiltration of the American vetting system into the British system, that being exemplified by the direct question on current or prior Communist affiliations. Now, as previously mentioned this question was a sine qua non for the Americans. Fortunately,

⁶³ GEN 183/12 'Atomic energy personnel security' p.5.

the recent disappearance and presumed defections of Guy Burgess and Donald Maclean⁶⁴ assisted the British in this concern, this apparent defection fuelling political arguments that a stronger security system was needed⁶⁵. This argument was of course supported, by the severe damage done already by previous spying scandals (notably Klaus Fuchs and Alan Nunn May that damaged Anglo-American relations).

Ultimately, the Committee of Positive Vetting concluded that the benefits outweigh the risks of the Tripartite proposal, summarising their argument as a choice of either A: 'Facing the political difficulties and adopting the whole of the program.'⁶⁶ Or B:

'Facing the risk (we are told virtual certainty) of losing any chance of American co-operation by omitting the direct question about Communist associations and possibly also the application of the procedure to those persons in the atomic energy field who are not likely in practice to secure really valuable information.'⁶⁷

Considering that the British Government were single minded in their pursuit of an independent nuclear deterrent alongside a renewed Anglo-American nuclear relationship it is not surprising that this opportunity was taken by them, despite its apparent polar position to the Government's previous decisions. Moreover, the actual meeting of the Committee of Subversive Activities for which this report (by the Committee of Positive Vetting) was written, reinforce several of the arguments already mentioned previously and expand upon them. Mr A. J. D. Winnifrith (the representative of the treasury on the Committee of Subversive Activities) argued that:

'The suggestions in the report had been put forward at the conference by the United Kingdom delegation in the hope that they would lessen American doubts about the efficiency of our security arrangements and remove obstacles to greater co-operation in atomic energy matters.'⁶⁸

⁶⁴ Two prominent members of what would become known as the Cambridge Spy Ring, which consisted of five confirmed members.

⁶⁵ GEN 183/12 'Atomic energy personnel security', p.6.

⁶⁶ Ibid., p.9

⁶⁷ Ibid., p.9

⁶⁸ The Committee of Subversive Activities, meeting seven, p.1.

This is crucial in that previously the implications of domestic policy on the nuclear relationship between Great Britain and the USA were second to the actual domestic security concerns. Moreover, this difference provides us with an insight as to why this 180 degree alteration in Government policy was done. In the past, the domestic aims had held providence over the international aims, mostly. However, this time that policy had been reversed, a proposal had been created to satisfy certain international requirements with the considerations to current domestic policy and realities coming second. In essence, the need for an equal atomic relationship between these two nation states was taking priority over the domestic policy of Great Britain. Despite this, the committee did discuss some of the difficulties raised by the Committee of Positive Vetting; these main issues were as follows:

1: It was pointed out that such a change in policy could not be concealed and a declaration of the policy would have to be made.

2: That the new proposal could not be confined to atomic energy as it would be seen as a method to placate the Americans. Therefore, it should be applied to all fields of secret work.

3: A minority of the committee felt that only the posts of the highest secrecy should be vetted in such a way and that Communist ties should not be inquired about directly.

Yet, the debate that followed on these issues was not whether these changes could be implemented, but how they could be implemented with suggestions of any kind of limitation few and far between. The Minister of Supply argued that it was possible to limit the security proposals to atomic energy, due to the aura of secrecy it possessed in the public eye⁶⁹. This is despite criticism in the report by the Committee of Positive vetting that such an argument was thin, as previously discussed. Conversely, Lord Portal made the following statement in support of the conclusions of the Committee of Positive Vetting:

‘That collaboration with the Americans was essential for the proper development of our atomic energy schemes. The major obstacle to such collaboration was the American doubt as to the efficacy of our security arrangements. If the proposals were adopted out position with the

⁶⁹ The Committee of Subversive Activities, meeting seven, p.1.

Americans would be considerably strengthened; if they were not adopted or were substantially modified, the effect might be disastrous⁷⁰

The committee ultimately accepted the recommendations of the Committee of Positive Vetting, requesting only a few follow up questions in regards to the policy for the Committee Positive Vetting to examine. Therefore, despite possessing no formal agreement with the USA, Great Britain's standing with the Americans at this point was certainly on the rise. This can be seen as the first step of Great Britain's policy to maintaining her World Power via an Anglo-American nuclear relationship.

A change of Government

With an electoral defeat on the 25th of October 1951, Attlee's Labour Government was removed from office and replaced by Winston Churchill's new Conservative Government. The Conservatives' time in power would ultimately last for the next 13 years and arguably presents a new era of Great Britain's foreign policy; that of a declined Empire and a nation looking for its place in the world. However, several aims of Attlee's Labour Government continued through the Conservative party's time in power. The most notable of these was the agreed need to revitalise the Anglo-American nuclear relationship. This mutual understanding and agreement of policy undoubtedly originates in the two parties' shared experiences during the wartime coalition Government, as well as an awareness of Great Britain's strategic vulnerability while lacking an independent nuclear arsenal. Both parties understood that the development of these nuclear weapons was essential and the fastest way to achieve this goal was to re-establish the Anglo-American nuclear relationship.

To what extent the American establishment preferred relations with the Conservative

⁷⁰ Ibid., p.1.

Government over Attlee's Labour Government is difficult to discern, but is a crucial factor in understanding the developments for both nations between 1951 and 1954. To continue, the significance of a prior cooperative relationship between Churchill and Truman cannot be underestimated; these two leaders worked closely with one another during the war and during the post war negotiations, and even when Churchill had been elected out of office during the Potsdam Conference, they continued to work together. Moreover, there is the consideration of how trustworthy the American establishment considered a left wing British Labour Government in a time where Socialism and Communism were viewed almost entirely one and the same, and were viewed with tremendous suspicion. Undoubtedly, the Labour Government's efforts to secure positive vetting and a satisfactory security arrangement for its secret services assisted in alleviating such concerns. Of course it is certainly possible that despite this, the US establishment felt more comfortable with a Conservative party in power, in their closest political, economic and social ally. Yet, despite this disposition, the Labour Government's unwavering pursuit of an independent nuclear deterrent set the Conservative Government up for a series of crucial developments that would fundamentally alter Great Britain's international position.

At the beginning of this period in January 1952, Winston Churchill visited the USA to discuss with President Truman a number of crucial areas of mutual interest. This included European security, the Far East and also nuclear issues. The very existence of this topic of discussion is evidence to the progress Great Britain had made in repairing the damage caused by the McMahon Act. Moreover, in the conclusions of these talks, it was agreed that military discussions concerning the use of atomic weapons could go

ahead between the two nations⁷¹. This is an unprecedented development in terms of Anglo-American cooperation. The McMahon Act had not yet been edited and would not be edited until 1954 and neither had Great Britain successfully detonated their first atomic weapon⁷². Therefore, it is critical that the outside pressures ultimately affecting the decisions made by the USA are considered, the most paramount of these being the pressures of a containment war against the Communists that was ultimately proving a losing battle for the USA. The USA's policy of containment, known as the Truman Doctrine⁷³, insisted on the prevention of the expansion of Communism and sought to make allies with previously neutral states and reinforce those connections with pre-existing allies. In the case of Great Britain, a foundation for this policy can be seen in the Anglo-American loan of 1946. The Loan itself guaranteed extensive funds for Great Britain at a low interest rate of 2%. What this loan allowed was for the British Labour Government to meet its election promises of social welfare reform, and maintain (if for a limited time) its overseas expenditures, particularly military bases. Moreover, the Marshall plan, implemented in 1948 demonstrates the USA's commitment to the policy of containment. The Funds from the Marshall plan going into Europe to rebuild infrastructure, agriculture and industry to pre-war levels at minimum. It was the aim of the Marshall plan to lift Europe out of crippling poverty and prevent the spread of Communism in these nation states. In this, it was successful. However, there is also the defection of Burgess and Maclean, two British agents, who, having been tipped off by Kim Philby, fled to Moscow, and again reiterated the serious problems in Great Britain's

⁷¹ S. J. Ball, 'Military Nuclear Relations between the United States and Great Britain under the Terms of the McMahon Act, 1946-1958.' *The Historical Journal* 38, no. 2 (1995), 439-454 (p.446).

⁷² Churchill would later declare in February 1952 that Great Britain would test their first atomic weapon before the end of the year.

⁷³ Adopted in 1947, the Truman Doctrine focused on the containment of Communist expansion, particularly in Greece and Turkey and is considered a foundation for the development of the North Atlantic Treaty Organisation (NATO).

security arrangements.

The twin Disasters in comparison reflected this losing war of containment in other regions, which alongside the outbreak of the Korean War, later fundamentally altered American foreign policy. No longer was the international scene dominated by one Western power and one Communist, the former possessing atomic weapons and the latter not. Now the USA was outnumbered by Communist powers and one of these powers also possessed nuclear weapons. The American policy of 'atomic monopoly' was no longer valid and it would only be logical to conclude that the USA was seeking a change in direction. This change of direction was only hastened by the Korean War after the twin disasters. Not only was the Korean War a demonstration of the Cold War turning 'hot' but it also emphasised the Americans' grave concerns in regards to world security. Prior to Korea, the USA had looked untouchable, even without the atomic monopoly and the crippling blow that was the fall of Nationalist China. However, with the crossing of the 38th Parallel in Korea and China entering the conflict, the USA and UNO forces found themselves in an eventual stalemate of conventional military forces. The intervention of China into this war at the Yalu River confirmed the Americans' worst fears: that not only were the Chinese willing to stand against American military power, but that they were capable of doing so, excluding the use of nuclear weapons. The very idea that the USA could fail to achieve total military victory in a conflict against a Communist power, especially one considered 'weaker' than the USSR, was a watershed moment for the USA's international policies. The most obvious solution to this issue was greater cooperation between like-minded states on military matters. The North Atlantic Treaty Organisation was one such step taken previously in 1949. Therefore, a pattern can be seen to develop from 1951, in which the Americans place an emphasis on greater

cooperation with their European allies and on a substantial nuclear deterrent. The USA may have been forced into a draw in the Korean War, but they had not been defeated militarily. However, despite their confidence in conventional military forces, the USA were still cautious; they (alongside their western allies) had underestimated the USSR in the quality of their conventional military forces, as shown by the MIG-15 in Korea⁷⁴, and they did not wish to be caught off guard again by such an assumption. Therefore, in regards to the Truman-Churchill Agreement reached in early '52, it can be seen as a premature agreement between the USA and her closest ally to offset recent the setbacks and to cooperate on nuclear issues as a means to achieve this offset.

The USA, now realising it had to seek greater cooperation with other like-minded states to maintain its international dominance chose to pursue this in one instance by addressing the Anglo-American nuclear relationship. Of course, as of 1952, the USA was still restricted by the McMahon Act of 1946; the USA could not exchange nuclear technical information with any foreign power. That being said, the USA could inform allied nations of its nuclear retaliatory plans in the events of a nuclear war, and it could bring other nations into this planning if it wished. The only obstacle to this was the willingness of the Joint Chiefs of Staff (JCS) to begin sharing sensitive information with the British. This had been a recurring concern for the Americans from 1945, even in the rather positive post war relationship regarding intelligence⁷⁵, there were sections of the American military that threatened to cut off their share of sensitive and secret information

⁷⁴ NAUK DEFE 13/342, Brundrett to Minister of Defence, FB/483/55, 'Note on Military Potential Section of Annex to D.C.(55)46', 28 October 1955.

⁷⁵ As a whole, the intelligence exchange relationship between the USA and Great Britain was more stable than the Anglo-American nuclear relationship and any ripples in this relationship were normally indicators of a wider policy confrontation between the two nations. Richard J. Aldrich, work 'British Intelligence and the Anglo-American 'Special Relationship' during the Cold War.' *Review of International Studies* 24, no. 3 (1998): 331-51, is an insightful read into this relationship.

for as long as other branches of the military maintained an exchange relationship with the British Secret Services. However, these threats, most notable being that of Admiral Inglis, the USA's Director of Naval Intelligence in 1945⁷⁶, were often dismissed or called as a bluff by their American colleagues.

It is of note that this period fundamentally begins a thawing of the Anglo-American nuclear relationship, but it does not reflect any alteration necessarily with the wider Anglo-American Relationship. The day to day, non-nuclear relationship between these two nations was and remained steadfast, cooperative and influential throughout the period in question, only suffering any kind of 'freeze' during the Suez crisis (as will be discussed later). The Anglo-American Loan, Marshall Plan and NATO are all clear indicators of a healthy relationship between these two nations. Therefore, the Anglo-American nuclear relationship, while frosty, in no way, reflected the wider, positive Anglo-American relationship. To continue, the ability of the Americans to treat the nuclear relationship with Great Britain as an entirely separate issue from their wider relationship represents the USA's superior strength in the relationship, capable of maintaining the said relationship without giving away what it considered to possess greater significance. Meanwhile, Great Britain was using every opportunity it possessed to improve said relationship, in the hopes of appeasing what was now the dominant power in this relationship.

A third nuclear power

⁷⁶ Admiral Inglis threatened to cut off sensitive information exchange between the USA's Navy and USAF due to its close British links. However, General Cabell, the director of Air intelligence retorted that he would rather cut of cooperation with the USA's naval than the British Air intelligence.

To continue, the events that were to follow the Truman-Churchill negotiations were to have a profound impact on not only Great Britain's international policies, but the world's over. The first great impact came from Great Britain, which on the 3 October 1952 detonated their first atomic bomb. This development not only signalled the emergence of the third nuclear power on Earth but it also indicated the beginning of a new Anglo-American nuclear partnership as the only two western nuclear states, or at least it should have indicated a new period of cooperation. The success of Operation Hurricane⁷⁷ was meant to have been Great Britain's gateway into a more cooperative and satisfying relationship between themselves and the USA, as well as a means for the USA to balance its own international calculations against the Communist threat it saw. In addition, it should have rectified the great imbalance of power and military capability that Great Britain had been suffering from since the end of the Second World War and had particularly noticed in the Korean War. However, developments were to occur that would fundamentally alter the balance of power in the atomic age; the development of the Hydrogen bomb. Therefore, instead of being a grand alteration to the status quo, this first successful test of an atomic weapon by Great Britain, pursued independently of American support, was a short lived victory.

With a blast strength of 25 kilotons, Great Britain's first atomic weapon had a larger yield than either the 'Trinity', 'Fat Man' or 'Little Boy' weapons deployed by the USA in the mid 40's. This was a substantial weapon and should have been the end of the development line for Great Britain. Yet, by the 1st of November 1951, within one month of this development by the British, the atomic bomb, a nuclear fission device, was rendered

⁷⁷ Operation Hurricane was the codename for the first successful test of an atomic weapon created independently by Great Britain.

obsolete by the advancements of American technology; the Hydrogen bomb as previously stated. The USA had successfully tested such a weapon, the next stage in nuclear weapon advancement, much to the dismay of the British. The impact on military thinking that the atomic weapon had produced at the end of the Second World War was now re-enacted anew, but this time, previous nuclear thinking was equally rendered useless by this thermonuclear device. The weapon, 'Ivy Mike', with an explosive yield of 10,000 plus kilotons, eclipsed the military value of 'conventional' atomic weaponry and reset the arms race that had truly begun after the end of the Second World War. This reset had an additional complication in that it destroyed what numerical advantage the USA may have possessed in nuclear weapons against the USSR; previous quantities of fission weapons were now no less devastating but no longer carried with them an air of authority. In this regard, the USA erased its advantage over other nations and can be compared to the British development of the Dreadnought class warship at the turn of the 20th century on naval warfare.

This development of the Hydrogen bomb, shortly after the British fission weapon was successfully tested leads into several interesting political considerations. The first and perhaps most crucial is, what exactly were the American intentions in regards to their agreed nuclear talks with the British in January 1952? President Truman was obviously aware of the advancement of the USA's thermonuclear project, which had been accelerated by the development of the USSR's own nuclear weapons, and while he was unaware of how far the British actually were with their own project, it is reasonable to assume that by Churchill's statement of having a weapon ready by the end of the year⁷⁸, the British were close to a working design. Therefore, what value did Truman see in an

⁷⁸ Hansard, House of Commons sitting, 'Foreign Affairs', 26 February 1952, Series 5, Vol.496, C945-1066.

Anglo-American cooperation on nuclear matters? If the British were not (quite) there with an atomic weapon, and the Americans knew such weapons would soon become obsolete, what did Truman want from such discussions? The most likely answer would be that Truman was seeking to not only cover all available options to him, but also begin a long term process of expanding previous agreements concerning the use of British airfields and military infrastructure. These agreements so far had been a tool to secure the American long term European security plan against the USSR, which also served as the USA's first line of defence against the Soviet menace. The USA had of course already negotiated the use of bases in East Anglia with the previous Labour Government, with the concession that the atomic bomb would not be used from those airbases without the consent of the British Government. However, it must also be noted how other political groups and individuals reacted to this announcement in the USA, notably senator McMahon, who Churchill quotes as follows in the House of Commons:

'The British contributed heavily to our own wartime atomic project. But due to a series of unfortunate circumstances the nature of the agreements which made this contribution possible was not disclosed to me and my colleagues on the Senate special atomic energy committee at the time we framed the law in 1946. Now we may consider rethinking the entire situation with all the facts in front of us',⁷⁹

McMahon was of course referring to the Hyde-Park Agreement created in secret by President Roosevelt and Prime Minister Winston Churchill as previously discussed. The very fact that this incident is confessed as unfortunate and regrettable as a result is a

⁷⁹ Hansard, '*Foreign Affairs*', C945-1066.

clear indicator of the direction the USA wished to take its future relationship with Great Britain. Of course, Senator McMahon was not the President of the USA, but he did hold the position of chairman of the Joint Committee on Atomic Energy and was also in 1952 a Presidential hopeful before illness prevented a successful campaign. Therefore, while not in an official capacity to reveal any policy planning on the USA's part, McMahon's words indicate certainly what a wider proportion of the United States political elite were coming to realise; cooperation with Great Britain on Atomic issues was paramount in securing their international aims. Of course, despite this, the development of this weapon was a fundamental setback for Great Britain, who had been strained economically by the development of the atomic bomb. Now, with such a weapon obsolete in the requirements of being a great power, Great Britain found herself hurrying to catch up again. The USSR was already developing its own thermonuclear device at this time and would successfully test one a little over a year after 'Ivy Mike'⁸⁰. With the Soviets caught up by 1953, the British found themselves again at the back of an arms race that in their opinion, they should never have had a disadvantage in from the beginning.

Nuclear deterrence and Slessor

However, nuclear capabilities, while fundamentally the core of military strength post World War Two, was not an independent strength; it relied fervently on the infrastructure and capabilities of those institutions designed to deliver them, most particularly the Air Force of any particular nation, but also including the Navy and even the Army in some circumstances (such as with the latter to be developed battlefield nuclear weapons

⁸⁰ The USSR tested their first thermonuclear device on the 12th August 1953, codename 'Joe-4'.

known as tactical nuclear weapons). If these infrastructures were not capable of delivering these weapons, or could be stopped reliably, then nuclear weapons themselves posed little threat. Because of this, Great Britain drafted in 1952 a paper in which the future preparations of the Nation's military were planned out for the following five years; the Report on Defence Policy and Global Strategy. In this document the British focused not only on possessing an independent nuclear deterrent (which now looked in sight, though with complications), but also on a renewed Anglo-American cooperation in atomic matters (which remained an ultimate goal regardless of the success or failure of an independent deterrent). However, the architect of this paper, Sir John Slessor, the British Chief of Air Staff, also focused on a number of other factors that would ultimately guide British Foreign policy for years to come. One of the most notable factors of this policy was the reliance on effective nuclear deterrence while reducing other conventional military expenditures. However, the overall strength of the said nation (in this case Great Britain) would remain the same, despite this reduction through an increase in reliance as well as reliability of an effective nuclear deterrent. This strategic thinking was later adapted to a degree in Eisenhower's 'New look' policy on the 30th of October 1953⁸¹; Eisenhower having succeeded President Truman after in the 1952 Presidential election. It is even argued that this paper would ultimately 'influence much of the Strategic Doctrine of the West'⁸². Of course, the 'New look' policy would emerge from the National Security Council meeting 162/2 (NSC 162/2) on 30th October 1953, one year after the British Strategic paper was published and shortly after the successful test of the Soviet Hydrogen bomb in August of 1953; certainly a major influence on the paper

⁸¹ Andrew J. Pierre, *Nuclear Politics: The British Experience with an Independent Strategic Force 1939- 1970*, (London, Oxford University press, 1972), p. 308.

⁸² *Ibid.*, p. 87

itself.

Moreover, Slessor fervently believed that nuclear deterrence had a greater stake in Great Britain's security than conventional military forces⁸³. In addition to this, Slessor, like many of his contemporaries, believed that the Soviet menace could only be met with superior force as it was 'bent on world domination'⁸⁴, but that it must be the Anglo-American alliance that was to meet this threat⁸⁵. Yet, despite holding many of the dispositions and opinions of his fellow Chiefs of Staff in regards to their vulnerability and the Soviet menace, Slessor did not agree that the country required or should pursue an independent nuclear deterrent. According to Corvin J. Connolly, 'Slessor vigorously opposed Britain's adoption of an independent nuclear strike force,' instead arguing for 'a unified Atlantic nuclear structure'⁸⁶. Slessor even made such ideas known in his contribution to the RAF review commemorating the 12th anniversary of the Battle of Britain, stating that;

'We British today cannot hope to compete in numbers or material strengths with our great American partner. But we can make a contribution in quality—in fighting value, in battle experience, in training, design and invention—that is second to none'⁸⁷.

Of course, Slessor did not see Great Britain as a junior partner in the Anglo-American alliance, he saw them as equal but contributing in different ways, as he made clear

⁸³ Corvin J, Connolly, 'Marshal of the Royal Air Force Sir John Cotesworth Slessor and the Anglo-American Air Power Alliance, 1940-1945', (Doctor of Philosophy, Texas A&M University, 2001). p.278.

⁸⁴ Connolly, 'Anglo-American Air Power Alliance, p.287.

⁸⁵ Sir John Slessor, 'Marshal of the RAF, Strategy for the West' (New York, Cassell & Co, 1954), pp. 26-28.

⁸⁶ Connolly, 'Anglo-American Air Power Alliance. p.279.

⁸⁷ NAUK AIR 75/57, Slessor's essay in 'RAF Review', September 1952.

previously. Therefore, it comes as no surprise that even after this retirement, Slessor made arguments against an independent nuclear deterrent⁸⁸. Of course, as a result of his drive for closer Anglo-American cooperation, Slessor made a significant contribution to not only the Anglo-American alliance, but to the advancement of Great Britain's own independent nuclear deterrent; although not intentionally. Due to his close ties with the American Air Force staff dating back to his command in World War Two, Slessor developed and enjoyed a cooperative bond between the USAF and RAF that continued despite political differences and blunders that would divide the USA and Great Britain at a government level for years to come. It is through this relationship that the Anglo-American alliance continued when, in 1956, Great Britain took part in its greatest foreign policy blunder, The Suez Crisis, as will be discussed later.

The closeness of the USAF and RAF is perhaps best shown in Slessor's meeting with Secretary of Defence Robert Lovett. Lovett was one of the architects of the CIA, NATO and served in the Second World War as Assistant Secretary of War for Air in the Department of Defence. Lovett was not only an influential figure of the time but was also due to the nature of his position as Secretary of Defence, second only to the President of the USA in authority over the USA's armed forces. In his visit to Great Britain, Lovett remarked to Slessor that he was impressed by the close cooperation between the USAF and the RAF, and also expressed his opinion and gratitude that the RAF and USAF were closer in cooperation than the USAF and the United States Navy (USN).⁸⁹ This is the relationship that Slessor was aiming to use when he planned for Great Britain's strategic role in the next five years via the 1952 Global Strategy paper. That Great Britain,

⁸⁸ Sir John, Slessor, 'Control of Nuclear Strategy.' *Foreign Affairs* 42, no. 1 (1963) pp. 96-106.

⁸⁹ PRO AIR 75/107, Memorandum, Slessor to Secretary for Air, 19 December 1952.

regardless of an independent nuclear deterrent, would become indispensable to the USA and assist in this alliance not in the quantity of its fighters or technology, but in its expertise and quality of training. The success of this relationship between military wings is undoubtedly a fundamental factor in the completion of the Anglo-American nuclear agreements that were to come in 1958 and 1959. This relationship between the RAF and USAF served as a reliable foundation for mutual defence negotiations in a period where, due to still conflicting policy aims, the Governments of the USA and Great Britain were not in sync with one another. Therefore, the success of Slessor's aims via this military relationship offered a foundation for the British Government that was entirely focused upon gaining an advantage for its independent nuclear deterrent via an agreement with the USA. That Government policy had of course been severely hampered by the development of the Hydrogen bomb and by the inefficiencies of the Korean War that showed Great Britain's vulnerability without such weapons. Moreover, Great Britain's revealed weakness in conventional weapons technology enlightened many to the requirement for an effective, conventional armed forces to support such an independent deterrent. Of course, despite this apparent support some historians are critical of Slessor's claims of influence amongst the Americans. S. J. Ball argues that any influence the British may have had over the American nuclear targeting plan in 1952 (the majority of this originating from Slessor's connections), was grossly exaggerated and its effectiveness must be doubted due to the US defence establishment's inability to finalise its own targets in this period⁹⁰. Therefore, the number of possible targets up for consideration at this time were between 5,000-6,000 and varied on all subject matters, from industrial capability to Military and economic areas⁹¹. However, the inability of the

⁹⁰ S. J. Ball, 'Military Nuclear Relations between the United States and Great Britain under the Terms of the McMahon Act, 1946-1958.' *The Historical Journal* 38, no. 2 (1995), 439-454 (p.447).

⁹¹ *Ibid.*,

British to procure a copy of the American's targeting plan (not matter how diluted) does not necessarily indicate that such influence did not exist (although the criticism of its effectiveness still remains). It indicates that those individuals (mainly of the USAF) who Slessor and others could influence were unable to produce a final and complete targeting plan for their allies in the British RAF. It must be noted that such targeting plans produced by the USA varied drastically from their original JCS format when applied at the operational level, as the institutions prescribed with carrying out the targeting plans would alter them substantially, at times combining separate objectives together⁹².

The 1954 Atomic Energy Act

In 1954 the USA congress passed a legislative amendment to the McMahon Act of 1946 (the Atomic Energy Act 1946), this amendment, the Atomic Energy Act 1954, altered several of the principles of the McMahon Act and critically symbolises the American shift in foreign policy towards its western allies as well as the success of Great Britain's own security improvements in reassuring the Americans. These modifications to the Atomic Energy Act support the previous statements concerning the shifting viewpoint of American foreign policy, especially in regards to those allies which can make a contribution to its long term strategic defence plans. The most crucial alteration to the McMahon Act came in the removal of point ten, the clause in which all nuclear information was classified as secret from inception and since it fell under the jurisdiction of the Atomic Energy Commission, would remain classified as such outside of the Government's direct intervention. Without this proviso, the Americans could theoretically

⁹² David Alan, Rosenberg and W. B. Moore, 'Smoking Radiating Ruin at the End of Two Hours', Documents on American Plans for Nuclear War with the Soviet Union, 1954-55.' International Security 6, no. 3 (1981): 3-38 (p.11).

begin the exchange of such technology as they saw fit; a situation greatly desired by the British. However, this new Act provided with it a new series of requirements and restrictions in regards to the exchange of nuclear information. Within these restrictions were requirements for a satisfactory security system to prevent the spread of classified information, a condition the British had certainly satisfied with the actions of the Tripartite Committee and its accepted proposals. There were also required reasonable guarantees from the cooperative party that they would not use such technology for military purposes, and while this ultimately left Great Britain in a similar position as had existed previously the act offered something very realistic to the British: Hope. The Americans demonstrated with this amendment that their policy on nuclear technology could shift and if it could be shifted once, then it could be again, it was all a matter of negotiations and time.

The clauses that fundamentally changed the Anglo-American relationship were clauses 123 and 144 of the 1954 Atomic Energy Act. Clause 123 contained within it the restrictions on how and to what extent future international agreements could impact this legislation:

‘In the performance of its functions under this Act, the Commission shall give maximum effect to the policies contained in any international arrangement made after the date of enactment of this Act.’^{93,}

Now, while such a clause had existed in the original 1946 Act, without the additional restrictions of Section 10 A 1-2, B1:

‘That until Congress declares by joint resolution that effective and

⁹³ Atomic Energy Act of 1954 (Public Law 703, 83rd Congress), Section 122.

enforceable international safeguards against the use of atomic energy for destructive purposes have been established, there shall be no exchange of information with other nations with respect to the use of atomic energy for industrial purposes⁹⁴ .

Great Britain could now negotiate a future treaty with the USA that would remove, for example, the restriction on technical information relating to nuclear weapons that existed in the 1954 Atomic Energy Act. That restriction laid out plainly, read; ‘That no such cooperation shall involve the communication of Restricted Data relating to the design or fabrication of atomic weapons.’⁹⁵ However, in this same section, there were additional stipulations that allowed for some exchange of information in particular categories. It also allowed for this authorisation to come from the President and the Department of Defence only and bypass the committee’s authorisation entirely. The committee in this regard was expected to simply contribute their ‘assistance’. These additional categories included ‘the development of defence plans’, ‘the training of personnel in the employment of and defence against atomic weapons’ and ‘the evaluation of the capabilities of potential enemies in the employment of atomic weapons.’⁹⁶ Finally, the new Atomic Energy Act also included a series of exceptions to the otherwise restricted data concerning nuclear weaponry, that clause reads as follows:

‘That no such cooperation shall involve communication of Restricted Data relating to the design or fabrication of atomic weapons except with regard to external characteristics, including size, weight, and shape, yields and

⁹⁴ Nuse, ‘Legislative History of the Atomic Energy Act of 1946, Section 10, Clause A1.

⁹⁵ Atomic Energy Act of 1954 (Public Law 703, 83rd Congress), Section 144. Clause A 6.

⁹⁶ Ibid., Clause 6 B 1-3.

effects, and systems employed in the delivery or use thereof but not including any data in these categories unless in the joint judgment of the Commission and the Department of Defence such data will not reveal important information concerning the design or fabrication of the nuclear components of an atomic weapon.⁹⁷

This clause allows the transfer of certain quantities of information to be made to the British from the USA in very particular fields. However, this allowance later proves to be crucial in the development of the Anglo-American cooperation, particularly in the negotiations and eventual conversations of RAF bombers to carry American atomic⁹⁸ and Hydrogen bombs⁹⁹ in 1955 and 1956. Without this allowance, such an exchange of equipment specifications would have been impossible. Therefore, the 1954 Atomic Energy Act sought to redraw the Anglo-American nuclear relationship from the ground up, but it did so by offering small concessions at first. The USA may have been opening up to British persistence, but it was cautious of its internal political pressures to simply acquiesce to the British demands, whereas the British were from this point on, pressing for every advantage they could get before the Americans changed their minds.

Of course, the American trepidation was well founded considering the severe blows the atomic spy scandals had inflicted on the nations trust of not only its own security services, but their allies too. In particular the Klaus Fuchs case stands above the rest, and served as justification for many in the USA that the McMahon act was no mistake. In 1951 Fuchs had been identified as the most damaging of all revealed atom spies from

⁹⁷ Atomic Energy Act of 1954 (Public Law 703, 83rd Congress), Section 144. Clause 6 B 1-3.

⁹⁸ NAUK., T225/645, Note for the record by R. T. Armstrong: Project E, 5 December 1955.

⁹⁹ NAUK., T225/645, M. Lynch to R. T. Armstrong, 28 March 1956.

the Manhattan project by the US Atomic Energy Commission¹⁰⁰. Moreover, he had been assigned to the Manhattan project by the British Government with their ‘full blessing’ despite knowing he was a Communist¹⁰¹, and this understandably made the Americans question whether they could trust their British allies with such secrets, even if their own failure to spot Fuchs had been excused under the pretence of wartime pressures¹⁰². Therefore, one cannot underestimate the concern and pressure the Fuchs incident placed upon the Anglo-American relationship. It undoubtedly served as adequate evidence for those who felt that the McMahon Act was a wise decision and can somewhat explain the difficult passage the 1954 Atomic Energy Act had in Congress¹⁰³.

Ultimately, this period proves a gradual wear on the paranoia that had directed so much of both nation’s political thinking and willingness to exchange in nuclear technology. The creation of the 1954 Act is a clear marker in the decline of such paranoia. However, what is evident by this point is Great Britain’s influence beginning to wane as her empire is dismantled and the pressures of the Cold War increase, especially on her struggling economy. It is this declining World Power that would dictate Great Britain’s ability to negotiate with the USA in the following years and not, as previously, the United States own political resistance to such notions of cooperation.

¹⁰⁰ Joint Committee on Atomic Energy. Soviet Atomic Espionage. Chapters 1, part 2, United States Government Printing Office, Washington 1951. pp.5-7.

¹⁰¹ Joint Committee on Atomic Energy. Soviet Atomic Espionage. Chapters 1, part 1, United States Government Printing Office, Washington 1951. P.1.

¹⁰² Joint Committee on Atomic Energy. Soviet Atomic Espionage. Chapters 1, part 3, United States Government Printing Office, Washington 1951. pp.8-9.

¹⁰³ In addition to the concerns over British security arrangements and events like that of Klaus Fuchs, the 1954 Atomic Energy Act struggled with several other aspects in Congress, most notable of which being the opening up of Atomic Energy technology to Private investment. For addition information please see ‘Richard M, Boeckel, ‘Record of the 83rd Congress (Second Session’ /cqresre1954082100.’

1955, the beginning of the new relationship

With the introduction of the 1954 Atomic Energy Act opening up the possibility for a renewed Anglo-American nuclear relationship; the two former partners wasted little time in cementing such a possibility. By 1955 a treaty entitled as an agreement between the two states to ensure 'co-operation regarding atomic information for mutual defence purposes',¹⁰⁴ was signed and is a milestone in the Anglo-American nuclear relationship. With this treaty, Great Britain had officially begun a new era of transnational cooperation in what can be considered, the most secretive and prestigious aspect of any cooperation with the United States; atomic technology. This treaty, as a whole, of course, simply provided a legislative framework for each nation to cooperate with one another on atomic matters. The eight page agreement did not expand upon the freedoms granted under the 1954 Atomic Energy Act, it simply duplicated them for an international agreement that the two nations may use as a foundation for future development projects and exchanges. Therefore, the treaty did have its issues and certain aspects of it were debated in Parliament. One such issue was raised by Tony Benn¹⁰⁵ to the Prime Minister Anthony Eden (having replaced Winston Churchill that same April¹⁰⁶). In this debate Benn went on to criticise the following:

Is the Prime Minister really satisfied that the Agreement specifically safeguards the right of the United States Congress to alter its terms unilaterally while no such provision is made safeguarding the rights of Parliament in this matter?¹⁰⁷

Benn is of course referring to Article two of the 1955 treaty in which it states 'All transfers of atomic information to the United Kingdom by the United States pursuant to this

¹⁰⁴ The full title of this act, passed on the 15th of June 1955 is as follows: 'Agreement between the government of the United Kingdom of Great Britain and Northern Ireland and the government of the United States of America for co-operation regarding atomic information for mutual defence purposes.'

¹⁰⁵ Tony Benn was a labour MP for Bristol South East from 1950-1964.

¹⁰⁶ Winston Churchill retired as Prime Minister on the 5th April 1955.

¹⁰⁷ Hansard, House of Commons sitting, 'Atomic information' (Anglo-American Agreement)', 12 July 1955, Series 5, Vol.543, C1739-1741.

agreement will be made in compliance with the provisions of the United States Atomic Energy Act of 1954 and any subsequent applicable United States legislation'¹⁰⁸. Eden defends this seemingly bias article with two simple points that reinforce previous arguments within this thesis. Firstly, Eden mentions how this article allows for the possibility of further relaxations by the Americans in regards to atomic energy (Eden even notes how he should not speak on it too thoroughly for fear of affecting such a decision¹⁰⁹). Secondly, Eden indicates quite correctly that 'There cannot be any relaxation in our legislation, because there is no such legislation'¹¹⁰. Eden's first point is a serious reminder of the delicate nature this nuclear alliance existed in. The Americans could withdraw support at any time, with minimal consequences for their main international policies and insignificant impact on their own nuclear technological advancement. The greatest consequence of such a departure would be on the American's ability to negotiate the use of airfields and other such facilities in allied nations. Yet, due to the growing pressures of the Cold War, alongside the great financial strains of declining empires and the post-war reconstruction projects, the Western European powers (including the UK), could not afford to disregard the security that came from the presence of American military on their national soil; even if such reassurances could be withdrawn at any time. To continue, Eden's words epitomises the argument that regardless of its limitations, the 1954 Atomic Energy Act represented one thing to the British Government, hope, and they were being deliberately careful with it for fear of ruining their only opportunity. Of course, Tony Benn's final question on whether British atomic workers would be screened by American security personnel¹¹¹ is reminiscent of concerns seen in Attlee's Labour Government when discussing the implementation of an 'American style vetting system'. The fact that such concerns remain, even in opposition, does suggest that while cooperation with the United States remained a priority, British Politian's (at least some of those in opposition), still had concerns over the invasiveness of American policies. Therefore, it is not unsurprising that despite the warmth that had been generated in the Anglo-American nuclear relationship; Great Britain continued in its

¹⁰⁸ Great Britain. Parliament. House of Commons. United States No. 3 (1955). Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United States of America for Co-operation regarding atomic Information for Mutual Defence Purposes, (Cambridge: Proquest LLC, 2007). P.3.

¹⁰⁹ Hansard, 'Atomic information'.

¹¹⁰ Ibid.,

¹¹¹ Ibid.,

pursuit of an independent nuclear deterrent. After all, the Government still maintained the aim of securing the nation's place at the top table of nations, and to do that still lay in the pursuit of nuclear weapons, but more specifically thermonuclear weapons as an independent deterrent. To continue, while the 1955 agreement did not expand upon Atomic Energy Act, or even come close to the level of cooperation previously enjoyed by the British during the Second World War, it did represent progress, and with progress came new opportunities. Yet, it must also be noted that this act came into existence during a peculiar time for British Foreign policy, while the nuclear relationship and the inter-military relationship between the USAF and RAF were at an all-time high, Anglo-American relations as a whole were on the downtrend and would continue to degrade until after 1956. Therefore, it is crucial that the geo-political events that occurred after this treaty are discussed in detail, as they bear critical significance in regards to the differing advancements of the Military establishment versus the Civilian establishment in regards to Anglo-American nuclear cooperation. However, what must also be considered is how these separate advancements contributed to repairing the damage caused by the same critical events (that being the Geneva accords of 1954 and the Suez crisis of 1956) that contributed to this difference. To do this, an understanding of the pressures of the Colonial Empires, as well as the developing American perceptions of the Cold War is fundamental. Finally, the ultimate result of these developments (The 1958 Mutual Defence treaty) must be examined and at what cost it was procured by the British establishment in terms of contribution and control must be analysed.

Geneva, Suez and the degradation of relations

While the Anglo-American nuclear relationship was strengthening slowly, Great Britain's relationship with the USA as a whole was taking severe blows due to a series of policy differences between the two nations. The first such complication came during the Geneva Accords of 1954, convened to resolve several international disputes concerning the Korea question and peace in Indochina between the 26 April and the 20 July; the Accords were the result of the latter question. In this period of time a series of political differences between the USA and Great Britain shone through. The accords sought to resolve the crisis in Indochina, in which the French had been resisting an anti-colonial

war with the Viet Minh for a number of years and while many other historians have studied this topic in far greater depth¹¹², there are certain points that should be conveyed. The first and perhaps most significant point lies in the opposing sides the two allies found themselves. Great Britain's delegation, headed by Anthony Eden supported a negotiated settlement to the conflict and an acceptance of the realities of the confrontation. That ultimately, regardless of Communist influences, this war was one of independence from the imperial rule of another European nation (France). Therefore, based on the Atlantic charter of 1941, particularly 'the right to self-determination' enshrined in clause three of the agreement, and its eventual successor the 'Declaration by the United Nations' in 1942, peace and independence should be supported by all nations; as the pursuit of self-government was one of the major aims enshrined by the United Nations during the Second World War. However, while Anthony Eden and the British delegation supported such a move, the Americans (and also the French) had differing aims; the USA in particular was being pressured by its own domestic politics to show 'results' in its foreign policies. Firstly, in the United States, Congresses mid-term elections were fast approaching (they occurred on the 2 November 1956) and with this pressure to maintain majorities in both the House of Representatives and the Senate, Eisenhower was keen to avoid the mistakes of his predecessor, President Truman. Truman's presidency in later years had been marred by world events, notably the fall of Nationalist China, the Korean War and the Soviet atomic detonation, though the latter was a lesser factor in his unpopularity. However, in regards to the fall of Nationalist China and the detonation of the atomic bomb by the Soviets, it had appeared to the general public that Truman's administration was incapable of ensuring American international policy and security. In effect, under Truman's presidency, the number of American enemies had doubled and the United States had lost the atomic Monopoly, resulting in his party's electoral ability being damaged and this can be largely credited with the resulting ousting of the Democrats from office in 1954. In addition, Truman had led the United States into the Korean War; this war resulted in not only a surprise stalemate with the Chinese forces along the 38th parallel, but also, due to the unpopular sacking of General Douglas MacArthur, resulted in a heavy blow to the President's

¹¹² See Fredrik Logevall, *Embers of War: The Fall of an Empire and the Making of America's Vietnam*, (New York, Random House, 2012), and Kathryn C. Statler, *Replacing France: The Origins of American Intervention in Vietnam*, (Lexington, University Press of Kentucky, 2007).

popularity; Truman being seen as not only too soft on Communism but also unwilling to shoulder the blame of the failed war in Korea. McArthur had of course made several statements to the press during his time as Commander of the UN forces in Korea without consultation or authorisation from his superior officers; as a result, McArthur caused a series of headaches for the USA and her allies by creating conflicting strategy claims as well as political aims for the war in Korea¹¹³. Moreover, Thomas Hennessey quite correctly identifies a significant instance in which the American establishment went to great efforts to avoid Her Majesty's Government (HMG) from directly criticising McArthur just before they were due to relieve him of his duties (An action HMG's was unaware of at the time). This instance occurred because, as Hennessey argues, the USA wished to avoid the implication that the UK had a significant say over its own military affairs.¹¹⁴ Therefore, Eisenhower could not afford to make the same 'mistakes' as Truman had previously; as Eisenhower had criticised the Truman administrations 'soft' approach to Communism to support his election¹¹⁵. If he failed to appear tougher on Communism, he knew he would risk losing the majorities in both Houses of Congress he had narrowly secured just two years with a midterm election due just after Geneva in November 1954. Moreover, these pressures from the United States domestic scene forced the Americans to maintain an overly zealous policy of Anti-Communism, to the point where the American Delegation, including virulent anti-Communist John Foster Dulles, the Secretary of State, refused to interact with the delegation from Communist China as they were not recognised by the USA¹¹⁶; Dulles even refused to shake the hand of Zhou Enlai, the head of the Communist delegation. But in effect, the Americans were both isolating themselves and sabotaging their own efforts in Geneva. With the failure to secure a united response from Western allies, the United States could not implement a military resolution without suffering similar political setbacks as Truman had suffered during the Korean War. As a result, the United States had forced itself into a corner that it was unwilling to remove itself from by not relaxing their zealous attitude in Geneva. This approach combined with their requirement for unconditional surrender of the enemy

¹¹³ Thomas, Hennessey, *Britain's Korean War: Cold War Diplomacy, Strategy and Security, 1950-53*, (Manchester, Manchester University Press, 2015) pp. 169, 170, 176, 177, 182, 183.

¹¹⁴ *Ibid.*, pp., 184-187.

¹¹⁵ Vincent P, DeSantis, 'The Presidential Election of 1952.' *The Review of Politics* 15, no. 2 (1953): 131-50. P,148

¹¹⁶ In comparison, Great Britain had recognised the People's Republic of China on the 6 January 1950.

¹¹⁷ alongside their need for unified action that was not popular amongst her allies resulted in the United States not recognising the accords. This situation was noticed at the time by noted columnist Walter Lippmann, who said:

'The American position at Geneva is an impossible one, so long as leading Republican senators have no terms for peace except unconditional surrender of the enemy and no terms for entering the war except as a collective action in which nobody is now willing to engage'¹¹⁸

Moreover, as made evident by Hennessey's previously discussed analysis, the American's, if they desired to shift their view to one more in line with their British allies, would almost certainly be unwilling to act upon it for fear of appearing to succumb to allied political pressure, just as they had endeavoured to avoid with McArthur. Of course, this inability to adjust by the United States had detrimental effects on the Anglo-American relationship, and particularly the relationship of Anthony Eden and John Foster Dulles (who would later quarrel during the Suez Crisis). Great Britain had been the ally pursued utmost by the United States to join their collective interjection due to their growing cooperation but also due to Great Britain's knowledge of colonial wars and the region as a whole. But with Great Britain's rejection of the plan, alongside other nations, the USA was unable to complete its objective. To continue, Eisenhower suffered during the mid-term elections of November 1954 shortly after the conclusion of the Geneva conference, in which the Republican's lost control of both the House of Representatives and the Senate.¹¹⁹ Now, while it is impossible to say whether a more favourable Geneva conclusion for the Americans could have altered that result, the American establishment did successfully avoid any controversy that might have occurred had they signed a document with the 'Red Chinese'¹²⁰, and Eisenhower made clear the USA's support for the armistice but not for other aspects of the agreement¹²¹. This

¹¹⁷ This is a completely unrealistic prospect considering the success of the battle of Dien Bien Phu which had ended the 7 May 1954 with total French defeat.

¹¹⁸ Walter Lippmann, *Greenville Democrat Times*, Friday 9 April 1954, USA, p.4.

¹¹⁹ In the Senate the republicans lost two seats, which alongside an independent, gave the Democrats control of the house. Meanwhile, in the House of Representatives, the Republicans lost 18 seats and gave control of that house, and in turn the whole of Congress, to the Democrats.

¹²⁰ John W, Holmes, 'Geneva: 1954.' *International Journal* 22, no. 3 (1967): 457-83. P.459.

¹²¹ Logevall, *Embers of War: The Fall of an Empire and the Making of America's Vietnam*, (New York, Random House, 2012) p.612

speech by Eisenhower certainly mitigated some damage that may have been caused. Therefore, it is difficult to discern the exact impact of the Geneva accords on the American midterm elections of 1954, the Eisenhower administration evading additional criticism adequately yet still suffering in the election. Furthermore, the extent to which the Americans blamed the British for this 'unfavourable' conclusion in Geneva is difficult to discern, but the impact caused must be recalled when considering the latter international events that was to sunder the Anglo-American relationship: The Suez Crisis.

The Suez Crisis represents the pinnacle of British Foreign policy failure; at no other point had Great Britain fouled so completely in the realm of foreign affairs. Moreover, that this situation 'may' have been avoided via simple communication only increases the pain of the failure that was Suez for the British. As with Geneva, sources exist devoted to the subject but certain facts of the situation must be conveyed for this argument in relation to the damage done to the Anglo-American relationship while the nuclear relationship was strengthening. The first point to be made is that Suez was not a spontaneous event (though the Anglo-French invasion alongside Israel was seen by many as spontaneous and imperialistic as will be discussed later). The build up to the Suez crisis was due to several international circumstances, the two most significant being failing empire and the rise of Nasser¹²² as the future President of Egypt. For Great Britain and France, Empire was seen as a means to post war recovery¹²³, now more than ever was there a desire to maintain Empire, though the strategies between these nations was vastly different¹²⁴. Yet, the Suez crisis would spark an unusual solidarity between these two Empires: Both were having their prestige attacked directly and neither could afford to let it go unchallenged¹²⁵. The Challenger, Nasser, the new president of Egypt, came into power via a military coup and in 1956 nationalised the Canal Zone and its profits in response to the USA withdrawing funding for Nasser's principle infrastructure project¹²⁶. It is also worth noting that it was due to the pressures of the post war recovery on the economy in

¹²² Nasser took executive office when he placed Neguib under house arrest in 1954 due to an attempt on the former's life by a member of the Muslim brotherhood, officially becoming President of Egypt in 1956.

¹²³ Robert Tombs and Isabelle Tombs, *That Sweet Enemy Britain and France, the History of a Love-hate Relationship*, (New York, Vintage Books, 200), p.612.

¹²⁴ *Ibid.*, p.612.

¹²⁵ For Great Britain's prestige concerns see: John Darwin, *Unfinished Empire: The Global Expansion of Britain*, (London, Penguin Books, London, 2012). p.363. For France's prestige concerns see: Tombs, *That Sweet Enemy*, p. 612, 617.

¹²⁶ Darwin, *Unfinished Empire*, p.360.

Great Britain that allowed the nationalisation to occur, with the Conservative Government removing the expensive and burdensome Suez Garrison from Egypt; the withdraw beginning in 1954. Of course, while Egypt possessed the legal right to nationalise the Canal¹²⁷, it is unlikely that Nasser would have attempted such a bold move with the presence of tens of thousands of British soldiers.

However, there were other factors contributing to pressures that would cause this crisis to occur. The Baghdad pact represents one such contribution and a wider trend in the Cold War; that of a stretched American Foreign policy struggling to 'contain' the Soviet menace. The Pact itself (also known as the Middle East Treaty Organisation or METO) was set up to be the beginnings of a NATO styled organisation to prevent Soviet infiltration and control of the Middle East region in 1955. Its original five members were Iran, Iraq (where it was based until 1958), Pakistan and Turkey and the United Kingdom; the USA joined later in 1958 on solely the military committee of the alliance. However, one of Nasser's primary aims at this time was to see Egypt become the head of the Arab world, but with the creation of the Baghdad Pact, it appeared that Great Britain was orchestrating such a leader in Iraq, a sympathetic ally of Great Britain and Egypt's rival in the Middle East: one can argue that this was an obvious means by which Great Britain could maintain its prestige and influence in the region. This lead Nasser, in fear of this act and the success of the Gaza strip raid by Israel on the 28 February 1955 to step up his anti-British policies, end his friendly relations with the Americans and begin his policy of playing the two Cold War sides against one another (the United States and the Soviet Union). He sought both an arm's deal from Czechoslovakia in a desire to rid Egypt of its dependency on Western weaponry and he is also sought American funding for the Aswan High Dam and when the Americans finally refused, went to the Soviets for funding as well as Nationalising the Suez Canal. This, along with Nasser's refusal to accept certain rewards in return for pursuing a peaceful resolution to the Arab-Israeli conflict caused the majority of western states to distrust Nasser, a mistrust that would ignite into comparisons to Hitler by the British and French when the nationalisation occurred¹²⁸. As Hasan Afif El-Hasan indicates that, Nasser's refusal to accept a peaceful settlement in favour of an unpredictable war, over the fact that it would mean siding with

¹²⁷ Tombs, *That Sweet Enemy*, p.615.

¹²⁸ *Ibid.*, p.614.

the West in the Cold War, was simply 'irrational'¹²⁹. This view is not unique and is supported by Egyptian Historian Abd al-Azim Ramadan who points to Nasser's inability to perform rationale political discussion and his solitary nature,¹³⁰ reinforcing the view that at the time, western nations, especially Great Britain could not trust Nasser; and this fear was confirmed when Nasser nationalised the Suez Canal.

The Suez Canal served as a major trade route from Western Europe to India and the Far East. Moreover, control and influence in the region allowed for the transportation of oil and other valuable resources and possessed a prestige and sensitivity to it afforded to few other assets. The Suez Canal company, while technically Egyptian, was not due to be returned to Egyptian control until 1968. When Nasser nationalised the Canal he closed it to Israeli shipping, alongside the straits of Tiran and he blockaded the Gulf of Aqaba in direct contravention of the Constantinople Convention of 1888 and the 1949 Armistice agreements. The British were of course, outraged and immediately began preparations and discussions to regain control of the canal, which was seen as not only a crucial trade route to India and the Far East, but also the thread from which all British influence in the Middle East was spun, without control of it, the British feared a complete loss of influence in the area as previously mentioned. Of course, not all nations were equally outraged, the United States being the clearest in its stance: that the American people would not accept an imperialistic solution, America seeing itself as the champions of decolonisation at this time and were beginning to question their clear association with imperialistic powers due to the difficulty it presented when trying to convince the new rising nations to take their side in the Cold War¹³¹. However, despite the obviousness of their stance, misinterpretations by the British Government resulted in several policy and publicity failures. Moreover, the French and Israeli Governments were both outraged and concerned by the events at Suez. The French of course also relied heavily upon the canal, whereas Israel was being prevented from accessing it in any regard, this being both an economic strike against Israel as well as a political one; the barring of use of the

¹²⁹ Hasan Afif El-Hasan, *Israel or Palestine? Is the Two-state Solution Already Dead?: A Political and Military History of the Palestinian-Israeli Conflict* (New York, Algora Pub, 2010). p.156.

¹³⁰ Elie Podeh, and Onn Winckler, *Rethinking Nasserism: Revolution and Historical Memory in Modern Egypt*, (Gainesville, University Press of Florida, 2004). pp.105-106.

¹³¹ Darwin, *Unfinished Empire*, p.359.

canal was a challenge by Nasser to Israel's right to exist in the Middle East.

In Great Britain, military intervention was readily supported by not only the Conservative Government at the time (including Eden who despised Nasser) but also by the majority of the Labour party. Even with the Labour Party's leader, Hugh Gaitskell, mellowing his initial response and willingness to support military action, such an aggressive policy was still largely supported by the party's MPs. Moreover, it is worth noting that at the time (the first initial days and weeks post the nationalisation) the general public's opinion matched that of Eden; Nasser must be removed. However, it is worth noting Gaitskell's main warning during his decline from absolute commitment to military intervention.

'Lest there should be any doubt in your mind about my personal attitude, let me say that I could not regard an armed attack on Egypt by ourselves and the French as justified by anything which Nasser has done so far or as consistent with the Charter of the United Nations. Nor, in my opinion, would such an attack be justified in order to impose a system of international control over the Canal-desirable though this is. If, of course, the whole matter were to be taken to the United Nations and if Egypt were to be condemned by them as aggressors, then, of course, the position would be different. And if further action which amounted to obvious aggression by Egypt were taken by Nasser, then again it would be different. So far what Nasser has done amounts to a threat, a grave threat to us and to others, which certainly cannot be ignored; but it is only a threat, not in my opinion justifying retaliation by war¹³².

This warning is strangely accurate in raising the very conditions that would lead to this failure in British Foreign policy. The British Government, along with the French and Israeli Governments would lose the support of the UNO in their later unilateral action and appear the aggressors in the months to come as a result. To continue, Gaitskell warned on the same day that the canal was nationalised, that regardless of anything else, it was imperative that the British (and Eden) 'keep the Americans closely informed'¹³³. This Eden also failed to do and when examined alongside Gaitskell's other warnings, could

¹³² Barry Turner, *Suez, 1956: The Inside Story of the First Oil War*, (London, Hodder & Stoughton, 2006). p.232.

¹³³ *Ibid.*, p.181.

support the historical theories that Eden's policy making ability was being damaged by his ill health. Thus, all three of the afflictions that would destroy the efforts of the British in Suez were stated by the opposition leader and could have been avoided had better policy been undertaken. Moreover, that these events would occur despite American efforts to achieve a peaceful solution only drove the condemnation further onto the British, French and Israeli Governments.

With the failure of a meeting of maritime nations who used the Canal¹³⁴, and the later rejection of all other diplomatic avenues, the British and their allies increasingly became frustrated and eventually only saw the pursuit of such diplomatic events as a time buying exercise while they prepared for invasion¹³⁵, this is of course, despite explicit warnings from Eisenhower that the American people would not accept a military solution¹³⁶. Furthermore, while the invasion only lasted from 29 October to 6 November, the political and economic repercussions were enormous. Public opinion turned against the Government, the public's anger at the nationalisation of the canal having subsided in the weeks since its occurrence and the public was surprised by what it saw as a sudden invasion; there had been no hint of such a policy decision by the Government in the preparations for the invasion, likely due to Eden's obsessive need for secrecy¹³⁷. Moreover, the Soviet Union used the threat of nuclear strikes on London to apply pressure to halt the invasion of Egypt. This in like with the United States, who were infuriated by the British disregard for their warnings applied overwhelming economic pressure via the International Monetary Fund (IMF) which, when aligned with the Saudi Arabian Oil embargos that followed, brought Great Britain to capitulation. These pressures of course came after a number of failed attempts by the United Nations to bring about political pressure upon the aggressors. During the crisis two votes were held by the United Nations Security Council to require Israel's withdrawal from the Sinai, both

¹³⁴ This meeting, suggested by Eisenhower to Eden contained the original surviving signatories of the Constantinople agreement as well as the sixteen largest users of the canal. Resulting in the following nations attending: Australia, Ceylon, Denmark, Egypt, Ethiopia, France, West Germany, Greece, India, Indonesia, Iran, Italy, Japan, the Netherlands, New Zealand, Norway, Pakistan, Portugal, Soviet Union, Spain, Sweden, Turkey, the United Kingdom, and the United States.

¹³⁵ Thomas Risse-Kappen, *Cooperation among Democracies: The European Influence on U.S. Foreign Policy*, (Princeton NJ, Princeton University Press, 1997). p.86.

¹³⁶ Tony Shaw, *Eden, Suez, and the Mass Media: Propaganda and Persuasion during the Suez Crisis*, (London, Tauris Academic Studies, I.B. Tauris, 1996). p.171.

¹³⁷ Turner, *Suez*, 1956. p. 210.

of these proposals were vetoed by Great Britain and France, it was not until the United Nations invoked its first ever emergency session via General assembly that the United Nations could bring to bear political pressure to end the fighting. Moreover, due to the loss of control of the houses of Congress (arguably a result of the Geneva accords of 1954) Eisenhower could not apply economic sanctions to Israel as he wished (the Democrat controlled houses rejecting his requests); this certainly hampered the already poor Anglo-American relations. Finally, the Soviet Union was allowed free rein in violently surprising in the Hungarian rebellion, the actions of Great Britain and France preventing the Western orientated powers from taking the moral high-ground in this situation and intervening. This joining of political disasters, economic turmoil and international embarrassment critically damaged the Anglo-American relationship, and arguably represents the lowest point in the two nations' relationship since the American War of Independence, with President Eisenhower stating to Eden the following 'he (Eisenhower) did not see much value in an unworthy and unreliable ally and that the necessity to support them might not be as great as they believed.'¹³⁸ This of course, was a dire warning towards the British, and yet it was rapidly remedied. While the Governmental relationship withered under Suez, the Anglo-American military relationship only strengthened during this same period, presenting a paradox where two nations' military relations developed in spite of governmental failure and conflict.

The RAF and the USAF, a lifeline to cooperation

While the Anglo-American political relationship went through a nightmare period, the military relations of these two countries only strengthened, and the majority of this strength came from the closeness of the RAF and the USAF in nuclear cooperation. Throughout this period, despite the political frostiness that existed at the Government level, the twin aims of the British establishment in regards to nuclear technology held. Firstly, that the technology would ensure Great Britain's place at the top table of nations, and secondly, that this deterrent would remain independent above all else, that it be a strategic tool for Great Britain and not a tactical asset of a collaboration of nations. Even

¹³⁸ Diane B Kunz, 'The Importance of Having Money: the Economic Diplomacy of the Suez crisis', in *Suez 1956: crisis and Consequences*, edited by Roger Louis and Roger Owen (Clarendon Press, Oxford, 1989). p.225.

prior to the 1955 mutual defence agreement, Great Britain and the United States had negotiated the use and exchange of Britain's current and future nuclear deterrent in regards to its possible integration under SACER (Supreme Allied Commander Europe). However, in this agreement known as the Wilson-Alexander agreement, the British only agreed to provide aircraft in contribution to SACER (they in return received funding from the USA that would help in equipping Great Britain with modern fighter aircraft¹³⁹). The British refused to discuss joint nuclear targeting or incorporating Bomber Command into SACER at any level¹⁴⁰. As quoted by S. J. Ball, 'The last thing the British actually wanted was for their independent nuclear force, which was in sight of realization, to be tied to the United States by anything other than paper guarantees'¹⁴¹. It is a crucial theme of the Anglo-American nuclear relationship that Great Britain remained throughout the development of the relationship, committed to its independent nuclear deterrent, despite the advantages that bargaining it away up may have provided.

To continue, as these political crises unfolded, joint targeting was discussed and planned between the two militaries and continued over the next few years. The significance of this cannot be underestimated, the United States was now formally (albeit at a military level only) planning joint targeting with another nation outside of NATO's own targeting plans. Thus, demonstrating Great Britain's unique position as being 'independent and strategic rather than Nato-oriented and tactical'¹⁴² in regards to its nuclear weapons program and planning. This situation at the time was unique to the British and the fact that this planning not only went ahead while Government relations were frosty at best, but it also developed significantly during the same period is tremendous. It was not the case that this was a one-time development towards cooperation during a difficult time, these plans developed continually despite the lack of good government relations. This is despite the observation that some of the negotiations that occurred during this time dragged on until 1958 (and that the commitments by the British in the Wilson-Alexander agreement were not completed until 1960¹⁴³). Of course, during this same period, one must also be aware of the impact of Project E and X, the

¹³⁹ NAUK., DEFEI3/222, 'Meeting with the British, 1700, 13 December, Hotel Talleyrand', 13 Dec. 1953.

¹⁴⁰ NAUK., DEFEI3/222, Wilson to Alexander, 12 March 1954.

¹⁴¹ NAUK., DEFE11/101 General Sir Nevil Brownjohn to General Sir John Whitely, 24 Jun. 1954.

¹⁴² Ball, 'Military Nuclear', p.449.

¹⁴³ Ibid., p.449.

projects undertaken to convert RAF aircraft to carry American atomic and thermonuclear weapons. Of course, this conversation took place via the exchange certain information afforded under the 1954 Atomic Energy Act and the 1955 Mutual Defence agreement. The Information covered weight, size, deployment mechanisms and all other engineering information related to the storage and deployment of such weapons, but of course no information relating to their construction or mechanism for detonation as per the restrictions in the 1954 Atomic Energy Act previously discussed.

However, these developments did not progress without attempts to halt and restrict their advancement, in fact, they continued in spite of these attempts. The first such attempt, and arguably the most revealing of American foreign policy at this time (which seemed to be a determination to work alongside Great Britain to secure Europe), was the AEC ban on the USAF exchanging the very specifications previously mentioned to the UKAEA (United Kingdom Atomic Energy Authority). This is an interesting development in itself as the wording of the 1954 Atomic Energy Act section 144 part B makes it clear that such an action was within the legal framework of the treaty. Yet, what is more significant is that the USAF disregarded this ban and transferred the information to the RAF despite it. As S. J. Ball correctly indicates 'The USAF had decided to co-operate more closely with the RAF on both nuclear planning and the transfer of nuclear technology and had no intention of being baulked by civilian authorities'¹⁴⁴. This is clear evidence of a fundamental shift in not only the mentality of policy makers, both civilian and military, but also the Anglo-American nuclear relationship and the Cold War itself. During the early years after the Second World War, nations were obsessed with securing their atomic information by any means they could, while balancing the need for scientific exchange and advancement. It was the highest priority that such matters were dealt with delicately, and verdicts by other parties could have tremendous repercussions (such as the Tripartite Committee's decision to pledge to the Americans a positively vetted British Civil Service or the United States Senate Special Committee on Atomic Energy which constructed the 1946 Atomic Energy Act, both policies which would dictate politics for years). Yet, here we have a military authority disregarding civilian orders and exchanging sensitive information in spite of direct opposition by a ruling authority. In specific regards to the Anglo-American nuclear relationship, it represents a breakthrough, even if it was

¹⁴⁴ Ball, 'Military Nuclear', pp.449-450.

undertaken by military and not civilian action. The Americans had shown their intentions, they were committed to this nuclear relationship, whatever form it may take did not matter, only that it did occur. For the first time, it was possible that the British may re-establish a relationship similar to their wartime relationship with the USA; the nation's goal since 1945.

Of course, certain obstacles still remained and these were ultimately tied to Great Britain's determination to keep its deterrent independent. The RAF of course began modifying its own bomber aircraft to carry American weapons (in what became known as Project E¹⁴⁵ and X¹⁴⁶ for atomic and hydrogen bombs respectively) since it now appeared that an official exchange of weapons may be imminent. However, treasury officials were worried about two significant factors and as a result, temporarily cut funding¹⁴⁷. Firstly, they were concerned by the lack of official government overview and agreement on this matter (it was a purely military agreement)¹⁴⁸ and secondly, that if this continued, the British nuclear deterrent would become dependent on American nuclear technology which would one: render all previous research and economic cost largely redundant and two: cause Great Britain to become reliant on the USA to maintain its technological level and nuclear deterrent¹⁴⁹. In effect this would remove its independent status; which as we know was the cornerstone of British nuclear policy¹⁵⁰. This fear is obviously well founded but was ultimately overwhelmed by the momentum of the military and funding was restored to the projects. This obstacle was defeated amongst others due to this growing momentum; S. J. Ball argues that the critical factor in this momentum was the now demonstrable application of the British nuclear capacity¹⁵¹ and from here on the advancement of the Anglo-American nuclear relationship was a clear imperative for both nations and a policy that could not be halted.

¹⁴⁵ NAUK., T225/645, Note for the record by R. T. Armstrong: Project E, 5 Dec. 1955

¹⁴⁶ NAUK., T225/645, M. Lynch to R. T. Armstrong, 28 Mar. 1956.

¹⁴⁷ NAUK., T225/645, G. Leitch to J. Macpherson, 22 Aug. 1956; J. Macpherson to D. R. Serpell, 4 Oct. 1956.

¹⁴⁸ NAUK., T225/645, D. R. Serpell to J. Macpherson, 'Project E: discussion with RAF', 5 Jun. 1956; J. Macpherson to D. R. Serpell, 4 Oct. 1956; R. Haynes (air ministry) to J. Macpherson, 24 Oct. 1956.

¹⁴⁹ NAUK., T225/645, J. Macpherson to D. R. Serpell, 1 Jun. 1956.

¹⁵⁰ To this date information regarding Project E and X is sketchy at best and remains constructed from loose documentation and no interviews as policy makers remain silent on this matter. Therefore, conclusions drawn from this evidence is tentative at best.

¹⁵¹ Ball, 'Military Nuclear', p. 451.

It is also worth noting the efforts undertaken after the Suez Crisis by the new Prime Minister Harold Macmillan in re-establishing cooperative relations with the US on a political level. In this he was assisted by his personal friendship with President Eisenhower dating back to their previous efforts working with one another during the Second World War. Therefore, the military cooperation discussed previously was formally approved on a civilian political level at the Bermuda conference March 1957. The occurrence of the Bermuda conference alone is significant evidence of the drive on both sides of the Atlantic to maintain the Anglo-American relationship, Macmillan being personally invited by Eisenhower to work out the issues caused by Suez after Anthony Eden's resignation. Moreover, with the civilian approval from both nations for this growing relationship and cooperation, the Americans revealed with absolute certainty that they were committed to the relationship. When the USAF had bypassed the AEC doubt could have remained what would occur within the United States political system, but with the official and announced support of the President of the USA, such fears were dismissed. Therefore, the British military, in particular the RAF, certainly provided a lifeline for an Anglo-American nuclear relationship to survive and take advantage of President Eisenhower's own personal negative disposition towards the McMahon Act and everything it had caused¹⁵². Indeed, the RAF had successfully pursued its own aims and the aims of its Government while maintaining the objectives of the British establishment; that being the maintenance and successful use of its independent deterrent.

The end of the road: Operation Grapple and the 1958 Mutual Defence Treaty

The development of the Anglo-American nuclear relationship to a functional and effective alliance may have been in sight of realisation in early 1957. However, a significant factor remained for the British until the success of Operation Grapple, the absence of a British constructed thermonuclear weapon. Without this weapon or the technology to produce one, Great Britain remained absent from the top table of nations, the possession of atomic weaponry significant but overall ineffective in comparison to

¹⁵² Melissa P. Yeager, and Charles Carter, *Pacts and Alliances in History: Diplomatic Strategy and the Politics of Coalitions*, (London, I.B. Tauris, 2012) p.125.

thermonuclear weapons. Therefore, Great Britain began tests to produce an effective thermonuclear device of British design from 1956; the tests that would result from these designs were known as Operation Grapple and took place on the Kiritimati and Malden islands. These tests of course, were in effect an attempt to not only pursue British foreign and defence policy, but also catch up in the technological arms race that dominated the Cold War in this period. By 1957 the British had a breakthrough with the detonation of 'Orange Herald' at 720KT¹⁵³ on 31 May 1957. Of course, technically this detonation was not a true thermonuclear detonation despite being claimed as one, but such information did not emerge until after the Cold War, for obvious propaganda reasoning. Yet, on 8 November 1957 Great Britain detonated their first fully functioning thermonuclear weapon at 1.8 Megatons, codenamed Grapple X¹⁵⁴. What quickly followed was a more efficient device codenamed Grapple Y, which also generated a larger yield of 3.0 Megatons¹⁵⁵. Great Britain now possessed functional thermonuclear technology and became the third thermonuclear power on Earth, just as they had become the third atomic power in 1952. With this breakthrough the British Government had achieved their original aim of establishing nuclear parity in terms of technological development. What aims remained were the continued establishment of the Anglo-American nuclear relationship and the pursuit of suitable technology to deliver these weapons, i.e. modern bomber aircraft and ballistic missile systems. Therefore, the detonation of Grapple X and Y must be considered a crucial point in British foreign policy history. However, the critical development that came as a result of the previous policy advancements undertaken by the Government and now the successful detonation of a British Thermonuclear device, was the signing of the a treaty with the United States. This treaty was named 'The Agreement between the Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland for Cooperation on the uses of Atomic Energy for Mutual Defence Purposes', known as the UK-US mutual defence Agreement', and it symbolised a new era in British foreign policy, one in which the Anglo-American nuclear relationship was stronger than

¹⁵³ Robert S, Norris, Andrew S, Burrows, Richard W, Fieldhouse (1994). Nuclear Weapons Databook, Vol. 5: British, French, and Chinese Nuclear Weapons, (Boulder, CO: Westview Press), and Xiaoping, Yang, Robert North, Carl Romney, (August 2000). CMR Nuclear Explosion Database (Revision 3 Technical report), SMDC Monitoring Research.

¹⁵⁴ Ibid.,

¹⁵⁵ Norris, Nuclear Weapons Databook.

ever before.

The treaties aims, as summarised on the first page of the treaty document, largely, if not entirely, connect to the significant advancements made by the British in military, scientific and political terms and thoroughly demonstrate the tremendous impact the British decisions had in the pursuit of this alliance. Firstly, the treaty states as its primary aim recognition of the mutual effect each nation has on the others defence capabilities and security, this is a direct reference to Great Britain's NATO membership as well as the value of Great Britain in allowing the presence of American Aircraft in Great Britain. Secondly, it refers to the fact that 'both countries have made substantial progress in the development of atomic weapons'¹⁵⁶. This clause gives weight to the view that at this point, the Americans saw that they could no longer prevent or ignore British advancement in the realm of atomic energy and therefore, it was logical to work with them now rather than in competition with them, certainly an advantage for the British. Thirdly, two clauses make reference to the material contributions of Great Britain and the United States in mutual Defence (NATO) as well as a direct statement of the value of future exchanges of information and equipment. This in itself is a tremendous step for the British who since 1945 had been in pursuit of an agreement resulting in American technology. Fourthly, the treaty makes reference to the secure environment that exists in which these transfers can be undertaken, a direct nod to the efforts undertaken by the Attlee Government and the Tripartite Committee in reassuring the Americans that their atomic energy security was on par with their own. Finally, the opening page of the treaty makes it clear that these policies can be undertaken due to the amended 1954 Atomic Energy Act, 'which was enacted with these purposes in mind'¹⁵⁷. This is clear evidence that the 1954 Atomic Energy Act was created as a stepping stone towards greater cooperation, and arguably hinting at a forward thinking American policy that ultimately rewarded the British for their perseverance in pursuing the said alliance. As previously discussed, the British did not wish to push for this alliance to obviously for fear of ending such possibilities before they had even begun; this policy worked.

¹⁵⁶ *Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United States of America for Cooperation on the Uses of Atomic Energy for Mutual Defence Purposes*. Washington, July 3, 1958. The Agreement Entered into Force on August 4, 1958. (London, H.M. Stationery Office, 1958), p.2.

¹⁵⁷ Anglo-American Mutual Defence Treaty, 3rd July 1958, p.2

The Treaty goes on, and in Article Two point B it clearly states a clause of tremendous value to the British:

‘...each party will exchange with the other party other classified information concerning atomic weapons when, after consultation with the other party, the communicating party determines the communication of such information is necessary to improve the recipients atomic weapon design, development and fabrication capacity.’¹⁵⁸

This clause allows the Americans to assist the British in advancing their own nuclear deterrent technology, production rate and overall efficiency of their program. This assists the British in costs as well as assisting the Americans in reducing the waste that the British incurred from their less efficient designs and relieving strain on American stockpiles of radioactive materials. What follows are a series of clauses that establish the exchange of one nuclear submarine propulsion plant, along with Uranium-235 and restrictions in regards to the transfer of nuclear weapons. In addition Article Five point B clearly states that ‘Under this agreement there will be no transfer by either party of atomic weapons’¹⁵⁹, this is of course an interesting development but as argued by S. J. Ball, in regards to weapons provided to the British by the Americans,

‘If the weapons were still under the control of the USAF and supervised by USAF personnel, no actual ‘transfer’ would have taken place and no American laws forbidding the transfer of nuclear weapons would have been technically broken - although they had been severely bent.’¹⁶⁰,

This clause proved to have little impact in the true exchange occurring between these two nations, and such restraints remained in letter only to appease those in politics who still feared exchanging nuclear secrets and technology. Therefore, this agreement can be viewed as a successful triumph of British Foreign policy. All of Great Britain’s aims were achieved by the signing of this document, or at least, were put in motion to be completed. However, newly released documentation concerning previously unseen clauses and concessions in the 1958 Mutual Defence agreement throws such

¹⁵⁸ Ibid., p.3

¹⁵⁹ Anglo-American Mutual Defence Treaty, 3rd July 1958, p.4.

¹⁶⁰ Ball, ‘Military Nuclear’, p. 453.

conclusions into question.

These documents, entitled 'Procedures for the Committing to the Attack of Nuclear Retaliatory Forces in the United Kingdom' contain within them the procedures that were to occur between the two allied nations in the event of a nuclear attack, as well as the restrictions placed upon certain nuclear assets within the Great Britain, both British and American. The Document is split between Annex A which covers British procedure and Annex B addresses American procedure, with each procedure overlapping at crucial intervals. The Procedure itself is based off of one of two warnings being received in regards to nuclear attack, Strategic or Tactical; strategic warning is defined as follows within the document:

'This implies the receipt of early information by the Joint intelligence Committee concerning enemy intention to attack. Under these conditions the maximum number of bomber aircraft would be deployed at readiness as quickly as possible.'¹⁶¹

Conversely, Tactical warning is defined as follows:

'This implies short warning of imminent attack derived from positive Radar or other means. Under these conditions that portion of the medium bomber force held at readiness would be available for instant retaliatory action whilst the remainder of the force would come to readiness and despatched in accordance with existing plans.'¹⁶²

What follows are concise procedural instructions of which ministers, intelligence officers and military commanders will be informed of the strategic or tactical warning and what their duties are in this event. It is worthy to note that the Chief of Air Staff is granted the ability to launch the medium bomber force into the air under 'positive control'¹⁶³, this power was also granted to the Chief of Air Staff in regards to those aircraft of the tactical bomber force assigned to SACER. The full clause reads as follows:

¹⁶¹ Report to the President and the Prime Minister: Procedures for the Committing to the Attack of Nuclear Retaliatory Forces in the United Kingdom, Annex A, Clause 1A.

¹⁶² Nuclear Retaliatory Forces, Annex A, Clause 1B.

¹⁶³ Ibid., Annex A, Clause 7

‘On receipt of tactical warning the chief of the Air Staff will order the RAF tactical bomber force assigned to SACER to immediate readiness. At his discretion SACER may order the tactical bomber force into the air under the above-mentioned ‘positive control’ procedures, if he deems such action necessary.’¹⁶⁴

However, that power was not added until the 11 May 1959 when certain additions concerning SACER were incorporated into the entirety of the procedure for retaliation and it is likely that this addition to the powers of the Chief of Air Staff was to prevent only a selection of the nuclear retaliatory capacity of the United Kingdom being launched and not the entire possible force, which otherwise would be waiting on the joint authorisation of the Prime Minister of Great Britain and the President of the United States.

The most crucial clause in this document is clause eight, entitled ‘Warheads of American Origin’ and it is this clause that challenges the conclusion that the 1958 Mutual Defence Agreement ensured the survival of Great Britain’s independent nuclear deterrent. In fact the clause suggest that it was not independent at all and instead worked under a dual-key arrangement between the two nations. Within clause eight it is clearly stated that the RAF medium bomber force, the RAF intermediate range ballistic missiles or IRBM force (which was also to be created as a result of the agreement dated 22 February 1958) as well as the Tactical bomber force¹⁶⁵ can only be launched when either strategic or tactical warning is received and with the joint consent of both the President of the United States of America and the Prime Minister of Great Britain due to the presence of atomic warheads of American origin in them. The exact wording is as follows:

Under both conditions described above, namely strategic and tactical warning, when the Prime Minister and the President of the United States consult together regarding the launching of nuclear retaliatory forces, it will be necessary for them to agree on the use of nuclear warheads of

¹⁶⁴ Murphy-Dean Agreement: Report to the President and the Prime Minister: Procedures for the Committing to the Attack of Nuclear Retaliatory Forces in the United Kingdom, 11th May 1959 edition, Annex A, Clause 7B.

¹⁶⁵ Murphy-Dean Agreement, Annex A, Clause 8C.

American origin.’¹⁶⁶

The statement and its implications are clear; a vast majority of Great Britain’s nuclear assets could no longer be launched without the authorisation of the President of the United States in a dual key fashion with the Prime Minister. Of course, it is worth noting that the American nuclear forces and SACER forces also located within the United Kingdom could not be committed under the same restriction until the President and the Prime Minister consent to their use¹⁶⁷. Of course, due to the use of ‘Positive Control’, the aircraft can be launched on pre-determined courses, but cannot deploy their weapons without additional definite instructions. Therefore, it must be questioned how independent the British deterrent remained and to what extent the restriction on American aircraft based in the United Kingdom reassured the British that it was worth abandoning their policy aim since 1945. Historian N. J. Wheeler argued in connection with this subject that:

“The misgivings expressed by people like Sir John Slessor, that the United Kingdom could not risk a situation in which the Americans could use nuclear weapons without reference to the British, had to be accepted by London as the price of collaboration with the United States.’¹⁶⁸

Of course, this documentation proves otherwise, the Americans, at least to an extent, now had to gain direct permission from London to use their nuclear weaponry based in the United Kingdom. Granted, the restriction worked in a vice a versa manner, but the British now possessed a say on nuclear weapon deployment that had not existed since the end of the Second World War. Yet, it cannot be dismissed that under this agreement the British nuclear deterrent was not an independent one and while the Anglo-American nuclear relationship was stronger than ever before, the cost in terms of policy was extreme.

Conclusion: An independent Deterrent?

¹⁶⁶ Ibid., Annex A, Clause 8

¹⁶⁷ Ibid., Clause 6, A-E.

¹⁶⁸ N. J. Wheeler, ‘British Nuclear Weapons and Anglo-American Relations 1945-54,’ *International Affairs (Royal Institute of International Affairs 1944-)* 62, no.1 (1985), pp.71-86, (p.85).

The death of the Anglo-American wartime nuclear relationship occurred due to two crucial conditions. The first being the extreme paranoia associated with this new kind of weaponry, weaponry that had rendered all previous military thinking worthless. This paranoia would be proved correct with the revelations of atom spies in both nations selling secrets to the USSR. The second was the unfortunate misfiling of the secret Hyde-Park agreement that could have guaranteed the survival of the Anglo-American nuclear relationship post Second World War. These two conditions lead to the creation of the McMahon Act in 1946 and this was the death of the wartime nuclear relationship. What followed from this momentous event was a simple but deep-rooted policy decision by the Attlee Government that would be pursued by successive British Governments. This policy was simple, to maintain Great Britain's world power status, and to do this meant acquiring nuclear technology as that was now the symbol for such international weight. With the failure of international solutions to the atomic bomb, including the Baruch proposal, the British method only became more necessary for their eventual aims. Great Britain pursued this goal despite several major difficulties including its declining empire, the growth of the Cold War confrontation, the development of the thermonuclear device (which extended the time required to achieve their objectives), and of course, the nation's pursuit of a strong post war economic recovery. Despite these difficulties, Great Britain would ultimately achieve its objective partially.

Between 1946 and 1954, the British pursued their aim of resurrecting the Anglo-American nuclear relationship mainly by appeasing the American security concerns in relation to Britain's own Civil Service due to a lack of Positive Vetting. The British in this situation undertook a complete policy reversal that saw the introduction of widespread and publicly announced Positive Vetting, a technique that had been previously advised against¹⁶⁹. Of course, while Great Britain was keen to advance its policy in regards to the USA, its willingness did have limits and those limits revolved around a combination of Public opinion and its own ability to pursue its aims without American assistance. As previously discussed, while Great Britain was willing to negotiate within the United Nations for either a total ban or a universal access to all nuclear related material; it was not willing to acquiesce to an American monopoly of such

¹⁶⁹ Atomic energy personnel security report by the Committee of Positive Vetting, pp. 1-9

technology¹⁷⁰; knowing that such technology was required for World Power status. Therefore, during this period Great Britain, while committed to its aim of World Power status, was unwilling to accept any policy that would limit its own pursuit of this status regardless of its potential benefits to allies or disadvantages it would bring to her enemies. This meant that this early period was dominated by overall policy deadlock and it would require significant political shifts to allow any kind of progress to be made.

What followed in 1954 would prove crucial in the pursuit of the renewed Anglo-American nuclear relationship. However, contrary to period thinking and perhaps hope, this relationship was not that of two independently capable nations, it was a relationship of a junior and senior partner, the USA being the senior partner. This is despite the fact that Great Britain had developed its own nuclear weapons, outside of American assistance, years before the 1954 Geneva conference. Unfortunately, this was achieved a significant period after the Russians had successfully tested their own nuclear weapons, and then the Americans had developed thermonuclear devices mere weeks after the British tests. This effectively left Great Britain exactly where they had started, a nation several steps behind the two World Superpowers. By 1954 Great Britain was a nation that was rapidly losing its world influence due to the pressures of its crumbling Empire and its struggling economy; it had not gained anything in terms of world power or prestige by 1954 due to its own independent deterrent and instead looked to have to invest in more advanced technology to simply keep pace with the USSR and the USA. The weapons Great Britain had produced for its deterrent were already out-dated by the time they were in the field due to the creation of the thermonuclear device. Geneva, ultimately, is a demonstration of Britain's decline from World Power status. While it is true that the conference was a marginal success for a time, and Great Britain had maintained its position as mediator in the Indochina dispute, its actions lacked the authority and power that they had once possessed. It was unable to bring many nations to the table, including the USA, which simply refused to take part in the negotiations after a certain point and it did not possess the authority or the will to attempt to implement the Accords when they were ignored two years later. The Americans, in comparison, had only grown in power and influence during the same time period. Moreover, in 1954 with the creation of the Atomic Energy Act the USA looked to be relaxing its own restrictions on the exchange of nuclear

¹⁷⁰ GEN75/16th meeting: Cabinet Atomic Energy, p.1.

technology, and at first this would appear hopeful for the British position. Although, it is possible that this is more of an acceptance of British persistence in the pursuit of this technology by the Americans due to the increased competition the USA would now experience for raw materials¹⁷¹. However, regardless of the reasons behind the creation of the 1954 Act, it is clear that by this point the damage had been done to Britain's ability to maintain its world power status and any joint venture between the two nations from now on would be heavily in the favour of the USA.

What followed this 1954 treaty are polarised results in regards to the military and civilian cooperation respectively. From 1954 until 1956 the Governmental cooperation between the two nations was slow but it ultimately ground to a halt when the Suez Crisis unfolded. The Crisis itself was Great Britain's last attempt at unilateral action as a World Power¹⁷² and reflects significantly on not only the rapid decline the nation had experienced since 1945, but it also sets a precedent for British decision and policy making from here on, and that precedent was to consider 'whether the Americans could be counted on to support British aims blindly?' In Suez, Eden had banked on either American support or at least American neutrality¹⁷³, he got neither and the Americans reacted harshly, apply economic pressure that Great Britain could not weather¹⁷⁴. In this event the British realised that not only did they now lack the power to act without the support of the United Nations or the USA, but also that their ally, the USA, was not guaranteed to support their endeavours and would forcefully act against them if it suited their own international aims. In comparison, unlike the civilian interaction which collapsed after Suez, the British and American military continued a series of negotiations through the Suez period and beyond, looking to build upon the 1954 Atomic Energy treaty. Ultimately, they were successful and this eventually lead to the 1958 mutual defence treaty, which was completed due to the successful repair of Anglo-American Governmental interaction after the 1957 Bermuda conference. Yet, as new documentation shows¹⁷⁵, the 1958

¹⁷¹ American concerns over Britain's contribution to the allied powers atomic strength as well as her negative contribution towards the efficiency of those raw materials required for the creation of atomic weapons is discussed by S. J. Ball in 'Military Nuclear Relations between the United States and Great Britain', p.446.

¹⁷² Darwin, *Unfinished Empire*, pp., 362-363.

¹⁷³ Ibid., p.362, and Tombs, *That Sweet Enemy*, p.615.

¹⁷⁴ Darwin, *Unfinished Empire*, pp., 362-363.

¹⁷⁵ The Agreement between the Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland for Cooperation on the uses of Atomic Energy for Mutual Defence Purposes' known

treaty, while certainly the beginning of a new Anglo-American nuclear relationship, it was not the same relationship that had existed during the Second World War.

By the time the 1958 treaty came about, and its rapid adjustment in 1959, many senior British military officers were and had already been speaking of interdependence but not dependence deterrent¹⁷⁶, and this is exactly what the 1958 treaty created. It was not a treaty that empowered Great Britain to act as a world power, equipped with American produced nuclear weapons as previous evidence suggested. Instead, this new evidence shows it was a capitulation of Great Britain's core international policy since 1945, the maintenance of its world power status. With the creation of this treaty and the revelations of the previously undisclosed sections concerning retaliatory strikes, Great Britain now required the cooperation of the USA to launch its own nuclear bomber force (those equipped with American warheads at least) from the United Kingdom. This in essence created a dual key system, similar to that which would be placed upon the Thor Ballistic missile system in 1959¹⁷⁷. With this alteration, the Anglo American nuclear relationship was revived, but with critical and absolute differences. This change reflects the realisation made during the Suez crisis that Great Britain's ability to act unilaterally was over. Now, Great Britain had to Act with either the United States or the UN, without one or the other it could not act with any significant authority. Even if it possessed its own independent nuclear deterrent, it lacked the conventional military, economic and political strength to withstand the disapproval of both its enemies in the USSR as well as its Allies in the USA. Therefore, by opting to concede the independence of their system in the 1958 Mutual Defence Treaty, the British were adapting to their new world position. The British had realised that either the Americans would not support their actions or plans, in which case an independent deterrent would be all but useless, or the USA would back them, and commit their support, and therefore the use of nuclear weapons if the need came, would be available anyway and thus limit the restrictions of this treaty. Therefore, the USA had extended its nuclear deterrent against the Soviet Union via the creation of an effective interdependent British system. The USA knew it could rely on the British in times of major crisis, such as was the case with the Korean War, in which they

as the UK-US mutual defence Agreement, 3rd July 1958 and the 11th May 1959 edited edition.

¹⁷⁶ Ball, 'Military Nuclear', pp. 453-454.

¹⁷⁷ NAUK, AIRI9/942, AC(58)2nd, 23/24Jan. 1958, chief of the air staff to chiefs of staff committee, 28 Jan. 1958.

agreed in advance the principle of retaliatory bombing in certain scenarios¹⁷⁸. Conversely, Great Britain could not act unilaterally and would instead have to act in accordance with the USA, an ally who the British knew, would not support their policies blindly and would in fact act against them if it suited their interests, as it was with Suez. Therefore, it is clear that the 1958 Mutual Defence Treaty, with the newly disclosed documentation, did not lead to the resurrection the Anglo-American nuclear relationship as it had existed during the Second World War. What it created instead was a partnership between these two nations in which there was not an equal exchange of authority; certainly in reflection of Great Britain's decline.

Bibliography

Primary Sources

¹⁷⁸ Hennessey, *Britain's Korean War*, pp.187-199.

1. Baruch, Bernard, Speech to the United Nations Atomic Energy Commission, 14th June 1946.
2. Boeckel, Richard M. 'Record of the 83rd Congress (Second Session).' In *Editorial Research Reports 1954*, vol. II, 571-640. Washington, DC: CQ Press, 1954. <http://library.cqpress.com/cqresearcher/cqresrre1954082100>.
3. Gleason, Sarell E., Goodwin, Ralph R., Kranz, Marvin W., Petersen, Neal H., Slany, William., 'Memorandum by The United States Representative on the Atomic Energy Commission (Baruch) to President Truman', *Foreign Relations of the United States, 1946, General; the United Nations: Volume I*, (Department of State. Bureau of Public Affairs, U.S. Government Printing Office, 1972) pp.920-929.
4. Hansard, House of Commons sitting, '*Foreign Affairs*', 26 February 1952, Series 5, Vol.496, C945-1066.
5. Hansard, House of Commons sitting, 'Atomic information (Anglo-American Agreement)', 12 July 1955, Series 5, Vol543, C1739-1741.
6. Joint Committee on Atomic Energy. *Soviet Atomic Espionage*. Chapters 1-3, United States Government Printing Office, Washington 1951. 82nd Congress, 1st session.
7. Nuse, James D. 'Legislative History of the Atomic Energy Act of 1946 (Public Law 585, 79th Congress)', *Atomic Energy Act of 1946 (Public Law 585, 79th Congress*, Vol 1, (U.S Atomic Energy Commission, Washington, 1965).
8. Accessed via FOI request: *United Kingdom procedures prior to action by enemy nuclear retaliatory forces based in the United Kingdom, 1958*.
9. Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United States of America for Co-operation regarding atomic Information for Mutual Defence Purposes. Great Britain. Parliament. House of Commons. United States No. 3 (1955), (Cambridge, Proquest LLC, 2007).
10. *Agreement between the Government of the United Kingdom of Great Britain and Northern Ireland and the Government of the United States of America for Co-operation on the Uses of Atomic Energy for Mutual Defence Purposes. Washington, July 3, 1958*. The Agreement Entered into Force on August 4, 1958. (London, H.M. Stationery Office, 1958).

11. Atomic Energy Act of 1954 (Public Law 703, 83rd Congress).
12. CAB 130/ad hoc/GEN 183, 'The Committee on Subversive Activities', meetings 1- 5, 7.
13. CAB 130/ad hoc/ GEN 183/01, 03, 08, 12, The National Archives, Kew, London.
14. DEFE 13/342, PRO, Brundrett to Minister of Defence, 'Note on Military Potential Section of Annex to D.C.(55)46', 28 October 1955, FB/483/55.
15. GEN 75/14, 16, 'Cabinet Atomic Energy'.
16. Joint Committee on Atomic Energy. Soviet Atomic Espionage. United States Government Printing Office, Washington 1951. 82nd Congress, 1st Session.
17. NAUK, AIR 75/57.
18. NAUK, AIRI9/942.
19. NAUK., DEFE11/101.
20. NAUK., DEFEI3/222.
21. NAUK., T225/645.
22. PRO AIR 75/107.

Secondary Sources

1. Darwin, John, *Unfinished Empire: The Global Expansion of Britain*, (London, Penguin Books, London, 2012).
2. El-Hasan, Hasan Afif, *Israel or Palestine? Is the Two-state Solution Already Dead?: A Political and Military History of the Palestinian-Israeli Conflict*, (New York, Algora Pub, 2010).
3. Greville, Rumble, *The Politics of Nuclear Defence: A Comprehensive Introduction*, 1st ed, (Cambridge, Polity Press, 1985).
4. Hennessey, Thomas, *Britain's Korean War: Cold War Diplomacy, Strategy and Security, 1950-53*, (Manchester, Manchester University Press, 2015).
5. Kunz, Diane B, 'The Importance of Having Money: the Economic Diplomacy of the Suez crisis', in *Suez 1956: crisis and Consequences*, edited by Roger Louis and Roger Owen (Clarendon Press, Oxford, 1989).
6. Logevall, Fredrik, *Embers of War: The Fall of an Empire and the Making of America's Vietnam*, (New York, Random House, 2012).
7. Morris, Jan, *Farewell the Trumpets*, (London, Faber, 1978).

8. Nichols, Kenneth D, *The Road to Trinity*, (New York, Morrow, 1987).
9. Norris, Robert S, Andrew S, Burrows, Richard W, Fieldhouse, *Nuclear Weapons Databook, Vol. 5: British, French, and Chinese Nuclear Weapons*, (Boulder CO, Westview Press, 1994).
10. Pierre, Andrew J, *Nuclear Politics: The British Experience with an Independent Strategic Force 1939- 1970* (London, Oxford University Press, 1972).
11. Podeh, Elie., and Onn Winckler, *Rethinking Nasserism: Revolution and Historical Memory in Modern Egypt*, (Gainesville, University Press of Florida, 2004).
12. Risse-Kappen, Thomas, *Cooperation among Democracies: The European Influence on U.S. Foreign Policy. Princeton*, (Princeton NJ, Princeton University Press, 1997).
13. Shaw, Tony, *Eden, Suez, and the Mass Media: Propaganda and Persuasion during the Suez Crisis*, (London, Tauris Academic Studies, I.B. Tauris, 1996).
14. Slessor, Sir John, 'Marshal of the RAF, Strategy for the West', (New York, Cassell & Co, 1954).
15. Statler, Kathryn C, *Replacing France: The Origins of American Intervention in Vietnam*, (Lexington, University Press of Kentucky, 2007).
16. Tombs, Isabelle., and Robert Tombs, *That Sweet Enemy Britain and France, the History of a Love-hate Relationship*. (New York, Vintage Books, 2008).
17. Turner, Barry, *Suez, 1956: The Inside Story of the First Oil War*, (London, Hodder & Stoughton, 2006).
18. Yeager, Melissa P, and Charles Carter, *Pacts and Alliances in History: Diplomatic Strategy and the Politics of Coalitions*, (London, I.B. Tauris, 2012).
19. Yang, Xiaoping, Robert North, Carl Romney, *CMR Nuclear Explosion Database (Revision 3 Technical report)*. SMDC Monitoring Research, (2000).

Journals

1. Aldrich, Richard J. 'British Intelligence and the Anglo-American 'Special Relationship' during the Cold War.' *Review of International Studies* 24, no. 3 (1998) pp.331-51.
2. Aldrich, Richard, and Coleman, Michael, 'The Cold War, the JIC and British Signals Intelligence, 1948.' *Intelligence and National Security* 4, no. 3 (1989) pp.

- 535-49.
3. Ball, S. J. 'Military Nuclear Relations between the United States and Great Britain under the Terms of the McMahon Act, 1946-1958.' *The Historical Journal* 38, no. 2 (1995), 439-54.
 4. DeSantis, Vincent P. 'The Presidential Election of 1952.' *The Review of Politics* 15, no. 2 (1953): 131-50.
 5. Goodman, Michael S. 'Who Is Trying to Keep What Secret from Whom and Why? MI5-FBI Relations and the Klaus Fuchs Case.' *Journal of Cold War Studies* 7, no. 3 (2005): pp.124-46.
 6. Gott, Richard. 'The Evolution of the Independent British Deterrent.' *International Affairs (Royal Institute of International Affairs 1944-)* 39, no. 2 (1963) pp.238-52.
 7. Holmes, John W. 'Geneva: 1954.' *International Journal* 22, no. 3 (1967): 457-83.
 8. Rosenberg, David Alan, and W. B. Moore. 'Smoking Radiating Ruin at the End of Two Hours': Documents on American Plans for Nuclear War with the Soviet Union, 1954-55.' *International Security* 6, no. 3 (1981): 3-38.
 9. Slessor, Sir John, 'Control of Nuclear Strategy.' *Foreign Affairs* 42, no. 1 (1963) pp. 96-106.
 10. Wheeler, N. J, 'British Nuclear Weapons and Anglo-American Relations 1945-54,' *International Affairs (Royal Institute of International Affairs 1944-)* 62, no.1 (1985),pp.71-86.

Thesis

1. Connolly, Corvin J, 'Marshal of the Royal Air Force Sir John Cotesworth Slessor and the Anglo-American Air Power Alliance, 1940-1945', (Doctor of Philosophy, Texas A&M University, 2001).

Newspapers

1. Lippmann, Walter, *Greenville Democrat Times*, Friday 9 April 1954, USA, p.4.