Nuclear Belief Systems and Individual Policy-Makers: Duncan Sandys, Unmanned Weaponry, and the Impossibility of Defence

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This thesis attempts to explore the influence that Duncan Sandys' experiences of the Second World War had on his policy preferences, and policy-making, in relation to British defence policy during his years in government. This is a significant period in British nuclear policy which began with thermonuclear weaponry being placed ostentatiously at the centre of British defence planning in the 1957 Defence White Paper, and ended with the British acquiring the latest American nuclear weapon technology as a consequence of the Polaris Sales Agreement. It also saw intense discussion of the nature and type of nuclear weaponry the British government sought to wield in the Cold War, with attempts to build indigenous land-based intercontinental ballistic missiles, and where British nuclear policy was discussed in extreme depth in government. The thesis explores this area by focusing on Duncan Sandys and examining his interaction with prominent aspects of the defence policy-making process. It argues that Sandys sought to navigate his way through this period of uncertainty by drawing heavily upon his experiences of the Second World War, and that this method of policy-making should be seen as a nuclear belief system unique to the individual, and therefore critical in understanding how British policy-makers approached the Cold War at the highest levels of government.

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Introduction

Unlike many politicians of his generation, Duncan Sandys has not been the subject of any detailed study. There have been no biographies, and he did not publish any diaries or memoirs.[1] When not simply referred to in passing as Winston Churchill's son-in-law, the main recurring item of personal information offered in relation to his work is that which concerns his difficult character - something Harold Macmillan speculated might owe itself to 'German blood', and which caused Gerald Templer, the Chief of the Imperial General Staff during Sandys' first year at the Ministry of Defence, to physically attack him and refuse to speak to him for twenty years.[2] Even Ian Smith, the formidable Rhodesian white minority leader with whom Sandys dealt with as Secretary of State for the Colonies, found him 'abrupt, even tending to aggressiveness' and 'completely devoid of those qualities of diplomacy and tact associated with British "statesmen"'.[3]

Where he has been discussed in direct relation to the policy-making process, historians have tended to neglect the influence that his experiences during the Second World War might have had on his policy preferences, albeit whilst occasionally accepting them as a non-specific influence.[4] Martin S. Navias has written that the Second World War left a 'lasting impression' on Sandys:

> [T]o the extent that he considered himself well cognizant of the major changes taking place in the realm of military technology - especially when it came to missile and nuclear weapons and their implications for what was

[1] In a 1996 book on the papers of former Cabinet Ministers it said 'Biographies are being prepared by Dr John Barnes of the London School of Economics, and by Duncan Sandys's son-in-law, Piers Dixon'. Neither appear to have been completed; Hazelhurst, C., Whitehead, S. and Woodland, C. (eds.), *A Guide to the Papers of British Cabinet Ministers: 1900-1964* (Cambridge: University Press, 1996), p. 319.
[2] Macmillan, H. and Catterall, P. (ed.), *The Macmillan Diaries: Prime Minister and After, 1957-66* (London: Macmillan, 2011), p. 128-29; Templer regarded Sandys as 'an interloper with little grasp of strategic issues in general or the heritage of the British Army'; Navias, M. S., *'"Vested Interests and Vanished Dreams": Duncan Sandys, the Chiefs of Staff and the 1957 White Paper'* in Smith, P. (ed.), *Government and the Armed Forces in Britain, 1856-1990* (London: The Hambledon Press, 1996), p. 223.
[3] Smith, I., *The Great Betrayal: The Memoirs of Ian Douglas Smith* (London: Blake, 1997), p. 58.
[4] C. N. Hill refers to Sandys as the 'strongest political personality' in his history of the British rocket and space programme, yet references to his background are limited to his having 'made an early reputation for himself during the war in the context of German guided weapons', and makes no mention of how this period influenced his outlook; Hill, C. N., *A Vertical Empire: The History of the UK Rocket and Space Programme, 1950-1971* (London: Imperial College Press, 2001), p. 19.

> known as "global war" - and well aware of the natural conservativeness of the defence departments.[5]

As a result of this, Navias writes that Sandys arrived at the Ministry of Defence in January 1957 'with a record indicating a predilection towards cost-cutting, reliance on nuclear deterrence and missiles, and a willingness to override service sensitivities'.[6] However, Navias frames Sandys' policy-making in terms of this 'predilection towards cost-cutting', rather than examining the extent to which the reductions in expenditure and manpower he became associated with were actually an incidental (but useful) by-product of the policies that he constructed for other reasons. To this end he credits Sandys with recognising 'the poverty of Britain's resources' in order to defend him against charges of lacking an appreciation or understanding of defence policy.[7] A. J. R. Groom was another who sought to minimise the role of Sandys' intellectual contribution towards the policies of 1957, writing that much of 'the lines of policy that were to lead to the Sandys Defence White Papers' had evolved from 1951 onwards.[8] There was certainly a large degree of continuity in what Sandys proposed in 1957, but Groom fails to cite Sandys as having provided an important voice in the defence debates during those years, or mention that his White Papers drew heavily on the proposals he had put forward in 1953 as the Minister of Supply during the so-called 'Radical Review'. This thesis will argue along a different line, and suggest that when this consistency in Sandys' policy preferences is properly taken into account, the economies he pursued can be seen as having been a significant aspect of his recommendations, but not as something that was allowed to take precedence over what he considered to have been sound strategic concerns.

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[5] Navias, M. S., *'"Vested Interests and Vanished Dreams"'*, p. 219.
[6] Navias, M. S., *Nuclear Weapons and British Strategic Planning, 1955-1958* (Oxford: Clarendon Press, 1991), p. 140.
[7] *Ibid*., pp. 248-49; Richard Moore follows a similar course to Navias in writing that Sandys' preference for unmanned weaponry 'reflected in part his involvement in the activities of the wartime Crossbow committee' (although he never expands on this and its direct effects on the policy-making process) having previously framed the White Paper as the result of Sandys following the 'logic' of instructions to reduce the defence budget and 'in particular to bring peacetime conscription to an end'; Moore, R., *Nuclear Illusion, Nuclear Reality: Britain, the United States and Nuclear Weapons, 1958-64* (Basingstoke: Palgrave Macmillan, 2010), pp. 9-11 and p. 254.
[8] Groom, A. J. R., *British Thinking About Nuclear Weapons* (London: Frances Pinter, 1974), p. 92; Desmond Wettern accuses Sandys of attempting to replace conventional forces with 'a still unproven nuclear deterrent system', but provides no background information as to what could have sent him down this course, and makes no mention of his previous opposition to certain naval programmes as Minister of Supply; Wettern, D., *The Decline of British Seapower* (London: Jane's, 1982), p. 172.

In contrast to this David French has written that Sandys' 'ideas about the right shape of defence policy had begun to form in 1953, during his period as Minister of Supply'.[9] It can be demonstrated that the ideas of 1953 remained at the forefront of Sandys' thinking in 1957; but, as this thesis will argue, the intellectual roots of the policies he had advocated in 1953 can be found in his wartime reports for the committees tasked with defending Britain from unmanned German weapons. Furthermore, the influence of these experiences on his ideas about defence policy was such that there emerged a consistency in Sandys' thinking that, whilst putting him ahead of the curve (and Britain's capabilities) during the defence debates of 1953-54, and making him the ideal man to re-organise British defence policy after the Suez Crisis, would eventually lead to his effective isolation in arguing that Britain base its entire strategic concept on the possession of Blue Streak, the increasingly costly and problematic British-built ballistic missile system.

Nuclear Belief Systems

That the Second World War had an influence of British nuclear policies is not a new interpretation. Margaret Gowing, author of the official histories, felt that there was a 'feeling that Britain as a great power must acquire all major new weapons'.[10] This was a position shared by Groom, who concluded that, whilst 'there can be no doubt that a Soviet threat was perceived... this strategic argument was itself a function of the political question regarding the rôle of nuclear weapons in shoring up Britain's position in the world', both as a 'means to deter Moscow and to influence Washington'.[11] More recently, Susanna Schrafstetter and Stephen Twigge have given particular weight to the specific memory of 'standing alone' in 1940 as a factor in British nuclear policy, with nuclear weaponry representing both a symbol of Great Power independence as well as a protection against Britain finding itself once again in such a perilous situation.[12] In addition to this 'soft' cultural aspect, historians such as Ian Clark and Nicholas J. Wheeler, who have sought to re-introduce strategic calculations into the debate, have

[9] French, D., *Army, Empire, and Cold War: The British Army and Military Policy: 1945-1971* (Oxford: Oxford University Press, 2012), p. 159.
[10] Gowing, M., *Independence and Deterrence: Britain and Atomic Energy, 1945-1952 - Vol. I* (London: Macmillan, 1974), p. 184.
[11] Groom, *British Thinking About Nuclear Weapons*, p. 576; see also: Andrew J. Pierre: 'One of the primary motivations for the nuclear force was the desire to gain influence over American policy and strategy'; Pierre, A. J., *Nuclear Politics: The British Experience with an Independent Nuclear Force, 1939-1970* (London: Oxford University Press, 1972), p. 304.
[12] Schrafstetter, S. and Twigge, S., A*voiding Armageddon. Europe, the United States and the Struggle for Nuclear Nonproliferation, 1945–1970* (Westport: Praeger, 2004), pp. 213-14.

written that 'an essential part of any history of British strategic thought in the nuclear age [is] to document the elements of continuity within it'.[13] This thesis suggests that these attempts to understand nuclear policy as a matter of mechanical strategic calculation and resource allocation, what Michael Carver calls 'a perpetual balancing act; between commitments and resources', leave something to be desired.[14]

In recent years, the literature on strategic cultures has gradually come to be associated with so-called 'belief systems' having had an influence on the policy-making process. In strategic studies, John Baylis and Kristan Stoddart have recently argued that '"ideas" and "beliefs," deriving from deep cultural roots, have an important, indeed even more important, role to play in nuclear decision-making'.[15] They contend that the 'reflection of state values and norms rooted in historical experience' manifested itself as a 'nuclear belief system' with six leading concerns. These were: the necessity of nuclear weapons as a guarantor of Britain's survival; the fear of 'adversaries or potential adversaries' acquiring them; as a contingency in case 'even the closest of allies might not come to Britain's assistance in times of crisis'; to impress and influence the United States; the belief that Britain had 'an inalienable right' to be a nuclear weapons state; and as a confirmation of Great Power status.[16] It was these ideas and beliefs of what they characterise as a relatively small policy-making elite (in the political, military, and scientific spheres) that they suggest shows 'ideational, more than materialist, factors have been at the heart of British nuclear policy'.[17]

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[13] Clark, I. and Wheeler, N. J., *The British Origins of Nuclear Strategy, 1945-1955* (Oxford: Clarendon Press, 1989), p. 18; see also: Henry S. Rowen and Philip Bobbitt, who have both written about the 'extension of strategic bombing' and the 'orderly continuation, by more effective means, of the strategic bombing campaign'; Rowen, H. S. 'The Evolution of Strategic Nuclear Doctrine' in Martin, L. (ed.), *Strategic Thought in the Nuclear Age* (London: Heinemann, 1979), p. 137; Bobbitt, P., *Democracy and Deterrence: The History and Future of Nuclear Strategy* (London: Macmillan, 1988), p. 21; 'The emergence of SAC (Strategic Air Command) was rooted in Air Force Experience. The air planners were all veterans of the bombing campaigns against Germany and Japan... and believed that the Air Force must serve as the nation's new first line of defense'; Rosenberg, D. A. 'The Origins of Overkill: Nuclear Weapons and American Strategy, 1945-1960' in Miller, S. E. (ed.), *Strategy and Nuclear Deterrence* (Princeton: Princeton University Press, 1984), p. 130; see also: Morgan, P. M., *Deterrence Now* (Cambridge: Cambridge University Press, 2003), p. 7.

[14] Carver, M., *Tightrope Walking: British Defence Policy Since 1945* (London: Hutchinson, 1992), p. vii; see also: Michael Howard: 'War is now seen as being a matter for governments and not for peoples; an affair of mutual destruction inflicted at remote distances by technological specialists operating according to the arcane calculations of strategic analysts'; Howard, M., *The Lessons of History* (New York: Vail-Ballou Press, 1991), p. 47.

[15] Baylis, J. and Stoddart, K.. 'The British Nuclear Experience: The Role of Ideas and Beliefs' in *Diplomacy and Statecraft*, 23:2 (2012), p. 331.

[16] *Ibid.*, pp. 343-44.

[17] *Ibid.*, p. 331.

This conception of a 'nuclear belief system', as Baylis and Stoddart would describe it, still has its deficiencies. This is due to its nature as something to be subscribed to collectively, whether in a department of state or more generally, which makes its tenets too wide-ranging to properly account for its intellectual origins. Just as when Peter J. Katzenstein argues that 'security interests are defined by actors who respond to cultural factors', it becomes comparable to the nature of governmental business, where, according to Graham Allison, 'deliberate choices' are overshadowed by 'large organisations functioning according to standard patterns of behaviour'.[18] This presents a monolithic type of culture, a kind of organisational memory, whether departmental or strategic, that simply exists as a non-specific influencing factor on those who encounter it. Martin Ceadel gives a good example of this when he describes 'defencism' as the main culture of the Cold War, describing it as a collective belief system where the policy-making elite as a whole subscribed to the idea 'that war can be prevented for indefinite periods, and that diplomacy as well as military force plays a part in achieving this'. The result of this was the prevailing belief that 'The best to be hoped for is... an armed truce'.[19]

The main drawback of the 'nuclear belief system' as a general will is that it restricts the space for individual initiative. In his work in the expanding field of British nuclear culture, Richard Maguire has gone further into the 'nuclear belief system', claiming that 'Beyond a general acceptance that the West needed some form of nuclear force to face the Soviet threat, there was no single, or even dominant, structure of explanation among the politicians, scientists, civil servants and military officers who discussed British nuclear weapons'. Nuclear policy-making, according to Maguire, 'drew upon individual

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[18] Katzenstein, P. J. 'Introduction: Alternative Perspectives on National Security' in Katzenstein (ed.), *The culture of National Security: Norms and Identity in World Politics* (New York: Colombia University Press, 1996), p. 2; Allison, G. T., *Essence of decision: Explaining the Cuban missile crisis* (New York: HarperCollins, 1971), p. 67.

[19] Ceadel, M., *Thinking about Peace and War* (Oxford: Oxford University Press, 1987), p. 72; similarly, Wolfram Kaiser writes that an 'excessive prestige orientation' afflicted British political elites following the Second World War, and that this was particularly noticeable in the Conservative governments of 1955-64 where 'background influences... were strengthened considerably by Britain's relative decline and its perception by the political elite' which 'was still largely a socially cohesive group with a similar educational background, and... an inherently conservative mental framework for policy-making'; Kaiser, W., 'Against Napoleon and Hitler: Background Influences on British Diplomacy' in Kaiser, W. and Staerck, G. (eds.), *British Foreign Policy, 1955-64: Contracting Options* (Basingstoke: Macmillan, 2000), p. 117 and pp. 127-28; Michael Blackwell has considered the post-war Labour government, writing that 'the leaders of the Labour Party... and the Foreign Office mandarins... shared the same world view'. Whilst their educational and social differences were sometimes stark, they were ultimately taught by the same 'Whig teachers' to revere the British Empire. Thus Blackwell explains 'the broad consensus on foreign policy issues that Labour and Conservative governments have traditionally demonstrated'; Blackwell, M., *Clinging to Grandeur: British Attitudes and Foreign Policy in the Aftermath of the Second World War* (Westport: Greenwood Press, 1993), p. 163.

experience, political and social tradition, understandings of technology, and specific Cold War experience'.[20] In addition to this, it should also be acknowledged that within the ranks of policy-makers, not all experiences carried equal weight.[21] John Simpson has written that whilst nuclear decision-making remained firmly in the control of 'the Prime Minister of the day and selected members of Cabinet', politicians generally 'found themselves limited in their understanding... by their lack of detailed knowledge', which left them 'increasingly dependent upon advice from officials'.[22] In light of this, the interaction between experiences and those policy-making processes that sought to ensure a more methodical approach is of particular interest. This is especially so when analysing the aftermath of the Second World War and the policies devised to maintain Britain's supposed responsibilities as one of the victorious parties. Due to the extensive mobilisation of British society that the Second World War required, almost everybody serving in any policy-making role throughout the 1950s and 1960s had previous war experiences to draw upon. This is the main reason why the defence backgrounds of politicians as individuals, where they can be discerned, deserves further study.

The Role of the Individual

Attempting to analyse policy preferences as products of experiences and beliefs is a well-worn area of interest, particularly when the results of those experiences and beliefs prove to have acted as a restrictive force. For example, a consensus has emerged that Harold Macmillan's years as the Member of Parliament for Stockton-on-Tees, from 1924-29 and then again from 1931-45, were a 'prime conditioning factor in his domestic political thinking throughout the rest of his career'.[23] This approach to understanding the

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[20] Maguire, R. '"Never a Credible Weapon": Nuclear Cultures in British Government during the Era of the H-Bomb' in *The British Journal for the History of Science*, Vol. 45, No. 4 (December, 2012), p. 521.

[21] This could even be due to the particular working methods of an organisation, as Julian Lewis has written. He praises the success of the Joint Staff system in being able to provide 'straight answers to straight questions' reasonably quickly because of the 'standard format of its procedures'. This compares favourably with the Foreign Office at the end of the Second World War where, lacking in such structures, policies emerged 'haphazardly according to which individual bestirred himself on a given question at a given moment'. He quotes Kim Philby as writing 'It was facile then [1940], as it is now, to speak of a Foreign Office view. There are a lot of people in the Foreign Office and quite a few views'; Lewis, J., *Changing Direction: British Military Planning for Post-war Strategic Defence, 1942-1947* (London: The Sherwood Press, 1988), p. 338.

[22] Simpson, J., *The Independent Nuclear State: The United States, Britain and the Military Atom* (London: Macmillan, 1983), pp. 232-34; see also: Clark and Wheeler, *The British Origins of Nuclear Strategy*; Gowing, *Independence and Deterrence*; and, for an American perspective, Schilling, W. R. 'The Politics of National Defense: Fiscal 1950' in Hammond, P. Y., Schilling, W. R., and Snyder, G. H., *Strategy, Politics, and Defense Budgets* (New York: Columbia University Press, 1962).

[23] Horne, A., *Macmillan, 1894-1956: Volume I of the Official Biography* (London: Macmillan, 1988), pp. 73-74; see also: Fisher, N., *Harold Macmillan* (London: Weidenfeld and Nicolson, 1982), p. 25, 366, and

economic policies of Macmillan as Prime Minister has also led some historians to suggest his experiences 'governed his thinking for longer than was appropriate', preventing him from addressing the signs of economic decline that became apparent during his period as Prime Minister.[24] In a similar vein, Jeremi Suri's *Henry Kissinger and the American Century* sought to show Kissinger's policy preferences as having been shaped by his experiences of wider cultural shifts. The rise of Nazism, which forced his family out of Germany, is said to have taught him that democracies required 'decisive leaders' and 'protections against themselves'; and his status as a Jewish immigrant allowed him to rise through 'tradition-bound institutions' which valued 'outsiders'. Consequently, 'Having witnessed the violent "collapse" of a society filled with morally self-righteous figures, Kissinger defined his career as a response', leading him towards measures that 'insulated the day-to-day management of foreign policy from public interference'.[25]

In the course of his biography, Suri does not shirk from criticising this approach. Because of the supposedly set nature of his thinking, Kissinger, he writes, struggled with 'challenges from people he did not understand', and consequently failed to deal with 'ideas that ran against his basic assumptions and experiences'.[26] Barbara Keys has built upon this contention, contending that Suri and other biographers of Kissinger tend to treat their subject 'above all as an intellectual', and as a 'rational actor' relatively unaffected by day-to-day concerns. In opposition to this image, Keys devotes particular attention the relationships that Kissinger painstakingly forged with Soviet diplomats, arguing that they serve as the best explanation for him remaining 'obsessively wedded to bipolarism', when, had he lived up to his much-vaunted realism, he would have

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369; Sampson, A., *Macmillan: A Study in Ambiguity* (London: The Penguin Press, 1967), p. 22; D. R. Thorpe: 'His searing experience was the Depression in pre-war Stockton, and this, together with his affinity with Keynesian ideas, hung heavily over the way he thought about financial policy'; Thorpe, D. R., *Supermac: The Life of Harold Macmillan* (London: Chatto & Windus, 2010), pp. 616-17.

[24] Fisher, *Harold Macmillan*, p. 154; see also: Charmley, J., *A History of Conservative Politics, 1900-1996* (London: Macmillan, 1996), p. 156; for his part, Macmillan had repeatedly made statements such as 'I shall never forget those despairing faces... They wanted work. The British economy was indeed sick, almost mortally sick'; Macmillan, H., *Winds of Change: 1914-1939* (London: Macmillan, 1966), p. 285.

[25] Suri, J., *Henry Kissinger and the American Century* (Cambridge, MA: Harvard University Press, 2007), pp. 8-14 and p. 247; David Jablonsky has made a similar, if somewhat less convincing, attempt at understanding Churchill as a war leader. To Jablonsky, Churchill was to become 'the quintessential example of a leader in total war', having 'inherited the basic tension of that era (Victorian) between emotional, often irrational romanticism and earnest, rational pragmatism. To this were added general Victorian beliefs in such shibboleths as the British Empire and the Whig version of history... Compounding all that were the personality traits formed by a boy raised in patrician elegance, but cruelly neglected by his parents'; Jablonsky, D., *Churchill, the Great Game and Total War* (London: Frank Cass, 1991), p. 185.

[26] Suri, *Henry Kissinger...*, p. 248.

recognised that 'the world was entering a new era of multipolarity'.[27] Even though Kissinger embraced the new state of affairs to the extent that he was still able to function in his capacity as both National Security Advisor and Secretary of State, Keys writes that 'Kissinger's habit of approaching problems through this bipolar "cage" exacerbated instead of resolved them', citing his misreading of the Indo-Pakistan War (1971) and 'consistently overestimating Moscow's influence over Hanoi' as examples of this.[28]

This idea of an intellectual 'cage' is of particular interest to this thesis. It is similar in some respects to previous studies of the 'operational code', which began with Nathan Leites' *A Study of Bolshevism*, which attempted to 'portray the spirit of the Bolshevik elite' by analysing the writings they came to live by.[29] Leites characterised a leading Bolshevik as somebody who 'lives to conduct politics', and argued that by subordinating a 'multi-dimensional life' to their politics, Soviet ideology - rather than normal human functions - became crucial to understanding their actions.[30] As with the more general notion of a 'nuclear belief system', this was quite a broad approach to discerning the motivations of policy-makers, and it was left to later political scientists to expand the idea. One notable attempt was Ole R. Holsti's case study of John Foster Dulles, the United States Secretary of State (1953-59).[31] By looking at all of Dulles' statements regarding the Soviet Union during his period as Secretary of State, Holsti found that Dulles was often forced to manipulate information as to make it sit more comfortably within his carefully-constructed worldview and his image of the Soviet Union.[32] As Holsti noted, this could be problematic from a policy-making perspective, and in a later study he analysed Dulles' well-documented interpretation of history that, Holsti noted, left him 'unburdened by doubts about the righteousness of his policies, the sinfulness of

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[27] Keys, B. 'Bernath Lecture - Henry Kissinger: The Emotional Statesman' in *Diplomatic History*, Vol. 35, No. 4 (September, 2011), p. 589 and p. 602.
[28] *Ibid.*, p. 603.
[29] Leites, N., *A Study of Bolshevism* (Glencoe: The Free Press, 1953), p. 15.
[30] *Ibid.*, p. 16.
[31] Holsti, O. 'The Belief System and National Images: A Case Study' in *The Journal of Conflict Resolution*, Vol. 6, No. 3 (September, 1962), pp. 244-52.
[32] 'Contrary information (a general de-crease in Soviet hostility, specific non-hostile acts) were reinterpreted in a manner which did not do violence to the original image. In the case of the Soviet manpower cuts, these were attributed to necessity (particularly economic weakness), and bad faith (the as-sumption that the released men would be put to work on more lethal weapons). In the case of the Austrian State Treaty, he ex-plained the Soviet agreement in terms of frustration (the failure of its policy in Europe), and weakness (the system was on the point of collapse)'; *Ibid.*, p. 249.

his enemies, or the "immorality" of those who would remain neutral in the conflict of good versus evil'.[33]

This thesis is primarily concerned with the effect that 'individual experience' had in the policy formation process; but these effects have to be situated within the procedures associated with the defence policy of a democratic society, and with the differing levels of status within the policy-making process that Sandys carried in various roles. Alexander L. George wrote that 'operational code beliefs', whilst serving as a 'set of general guidelines', are unable to 'unilaterally determine the individual's choices of action' due to the existence of 'other variables'.[34] The 'other variables' had also been considered by Holsti, who found the most rewarding situations for 'detailed investigations of decision makers' beliefs' to be those situations characterised by, amongst other things, 'Nonroutine situations', the need for "Long-range policy planning', and where 'the situation itself is highly ambiguous'.[35] Holsti was also able to identify situations where an increased responsibility was placed on the individual, having been relatively isolated from collective decision making procedures, as providing fertile ground for the use of individual beliefs in the policy-making process.[36] This echoed earlier work by Sydney Verba, who discussed how personal preferences are more likely to be called upon in more ambiguous situations where established procedures and group input were less apparent.[37]

British defence policy-making throughout the 1950s was characterised by these scenarios, as policy was organised and re-organised in a strategic environment subject to rapid technological development and seemingly never-ending financial pressures. As a result, such ambiguity was ever present.[38] To this end, Baylis, despite describing the

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[33] Holsti, O. 'The "Operational Code" Approach to the Study of Political Leaders: John Foster Dulles' Philosophical and Instrumental Beliefs' in *Canadian Journal of Political Science*, Vol. III, No. I (March, 1970), p. 139.
[34] George, A. L. 'The Casual Nexus Between Cognitive Beliefs and Decision-Making Behavior: The "Operational Code" Belief System' in Falkowski, L. S. (ed.), *Psychological Models in International Politics* (Boulder: Westview Press, 1979), pp. 103-4.
[35] The others are 'Decisions made at the pinnacle of government', 'Circumstances of information overload', Unanticipated events', and 'Circumstances in which complex cognitive tasks... may be impaired'; Holsti, O. 'Foreign Policy Formation Viewed Cognitively' in Axelrod, A. (ed.), *Structure of Decision The Cognitive Maps of Political Elites* (Princeton: Princeton University Press, 1976), pp. 30-31.
[36] Holsti, O., 'The "Operational Code" as an Approach to the Analysis of Belief Systems' in *Final Report to the National Science Foundation* (Durham: Duke University Press, 1977), pp. 16-18.
[37] Verba, S. 'Assumptions of Rationality and Non-Rationality in Models of the Inter-national System' in *World Politics*, 14 (1961), pp. 102-3.
[38] Richard Way, who served as Deputy Secretary at the Ministry of Defence, said it was surprising how long it was before Britain really embarked on any proper defence planning, claiming 'Every year we had

more general 'nuclear belief system', has written that a 'fundamental lack of agreement amongst political and military leaders... had important implications for British foreign and defence policies'.[39] However, where Sandys' policy ideas were only taken up in part whilst Minister of Supply, he was the first Minister of Defence to be given overall control (subject to Cabinet approval) over both the broad direction of British defence policy and of decisions relating to equipment, effectively handing him control over Britain's strategic posture, and therefore making his personal preferences, and their intellectual origins, of paramount importance in any analysis of policy-making in this period.

George said that 'an actor's beliefs' are more likely to be found in 'policy preferences' than 'the option he finally chooses', owing to the variables he cites - 'domestic politics, organizational considerations, the necessity of compromise, etc.' - making preference, rather than final decisions, as 'the dependent variable' in detecting the part played by beliefs in any decision.[40] To George, determining the impact of beliefs on 'decisional choices' requires two things. One is tracing in detail the 'steps in the process'. Another is the identification of consistency between beliefs and decisions, which is first established on 'relevant behavioural data from his prior life history'.[41] Between his Second World War service and his rise to policy-making roles, Sandys provided clear 'relevant behavioural data' in the form of public statements and literary interpretations - some of questionable accuracy - of his experiences defending Britain from unmanned German weaponry. These are utilised in this thesis to provide an idea of what informed Sandys' policy preferences.

This approach to problem solving also encroaches upon the idea of 'political myth', which is also relevant to Sandys' policy-making decisions. Henry Tudor defined myth in this context as 'an interpretation of what the myth-maker (rightly or wrongly) takes to be hard fact'. What is more:

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an absolute crisis' trying to re-organise existing plans to fit immediate financial constraints. Richard Powell, who had been the Permanent Secretary at the Ministry of Defence during Sandys' period in charge agreed, adding that after the 1952 Global Strategy Paper there were only really annual revisions designed to contain things. Sandys was the first person who 'sat down and tried to think out what the future was'; the recordings of the conference held at the Liddell Hart Centre for Military Archives, King's College London on 1 July, 1988 (reproduced with the permission of the Trustees of the Liddell Hart - Centre for Military Archives); NHP/SR1.

[39] Baylis, J., *Ambiguity and Deterrence: British Nuclear Strategy, 1945-1964* (Oxford: Clarendon Press, 1995), p. 360.

[40] George, 'The Casual Nexus...', p. 104.

[41] *Ibid.*, p. 105.

> It is a device men adopt in order to come to grips with reality; and we can tell that a given account is a myth, not by the amount of truth it contains, but by the fact that it is *believed* to be true, above all, by the dramatic form into which it is cast.[42]

Paul Fussell concurred, famously describing memoirs as a 'kind of fiction' dependent upon 'continuous implicit attestation of veracity or appeals to documented historical facts'.[43] This was written in relation to memories of the First World War, the negative myths that emerged from which have been addressed by Dan Todman, who concluded that the 'survival and triumph of a set of negative myths' was largely because they 'remained useful' in a twentieth century Britain marked by 'changing circumstances'. The myths, therefore, 'retained an explanatory power' that ensured their 'survival and eventual dominance'.[44] Jean Peneff has described the 'mythical element in life stories' as being the result of a 'mental construct which, starting from the memory of individual facts which would otherwise appear incoherent and arbitrary, goes on to arrange and interpret them and so turn them into biographical events'. It is claimed that such myth-making is 'common in all societies', but is 'especially widespread in societies undergoing rapid development and change'.[45] Richard Carr offers a relevant example of this in writing that young Conservative politicians who had served in the First World War sought political benefits from 'constantly speaking of a generation wiped out, and selling themselves to a grieving public as the living embodiment of lost sons, brothers and fathers come election time', which had the effect of propagating the stubborn image of their war having been a disaster.[46]

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[42] Tudor, H., *Political Myth* (London: Pall Mall Press, 1972), p. 17.
[43] Fussell, P., *The Great War and Modern Memory* (London and New York: Oxford University Press, 1975), p. 310.
[44] Todman, D., *The Great War: Memory and Myth* (London: Hambledon Comtinuum, 2005), p. 223.
[45] Peneff, J. 'Myths in Life Stories' in Samuel, R. and Thompson, P. (eds.), *The Myths We Live By* (London: Routledge, 1990), p. 36.
[46] Carr, R., *Veteran MPs and Conservative Politics in the Aftermath of the Great War: The Memory of All That* (Farnham: Ashgate, 2013), pp. 7-8; Martin Francis has described how Ian Smith in Rhodesia, with support in London from Douglas Bader, used 'the myth of the wartime flyer' to 'reassert racial hierarchies in both the disintegrating empire and the metropole itself' through 'a process of selective denial and extensive refashioning, not least the expunging of non-whites from the dominant memory of the RAF at war'; Francis, M., 'Men of the Royal Air Force, the Cultural Memory of the Second World War and the Twilight of the British Empire' in Grayzel, S. R. and Levine, P. (eds), *Gender, Labour, War and Empire: Essays on Modern Britain* (London: Macmillan, 2009), p. 192; see also: Simon Ball's claim that the different generations of policy-makers in Macmillan's government, which he divides between those who had missed out on the First World War, but had grown up in its aftermath, and those who had entered politics in the 1930s. These tensions 'had some impact on policy-making', but more importantly 'shaped how men understood what had happened'. Macmillan, who was 'above' these tensions as the only member

The 'explanatory power' of Sandys' own myth-making is crucial in understanding the consistency in his personal belief system, and its importance in allowing him to determine its usefulness during periods of difficulty. Equally so, the failure of experiences in determining policy in its final form - the negative side, as it were - is equally deserving of further analysis. Whilst Sandys may not have had cause to cast his experiences into a 'dramatic form', he certainly came to possess an image of his wartime experiences that differed from reality in critical respects and which, consequently, affected his approach to solving problems in the policy-making process. In this respect, the myth he created around his wartime experiences proved useful. This returns to what has been said about 'nonroutine' and 'ambiguous' situations providing the most appropriate circumstances for the use of personal belief systems in the policy-making process.

Thesis Structure

To illustrate how Sandys came to depend on his experiences of the Second World War, this thesis follows the development and utilisation of his policy preferences in chronological fashion. The first section looks at Sandys' participation in the Second World War, and how he came to interpret the role he played in defending Britain from unmanned German weaponry. By following Sandys' actions through official documents and related histories, and then comparing these with his later interpretations of events, it can be demonstrated how Sandys developed an image of his own contribution to the war effort that was occasionally exaggerated by retrospectively assigning a greater importance to the unmanned weapon threat at a time when his policy preferences were beginning to have an influence on official policy. The second section follows on from this by showing how Sandys first applied the perceived lessons of his war experiences to the policy-making process, arguing for a radical overhaul of British defence policy in 1953 and 1954 that would have seen Britain base its security on the descendants of the weapons he had first been impressed by during the Second World War.

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of his government to have fought in the First World War 'created the view that the post-war generation... had worked in an honourable and statesmanlike fashion', where as the younger men 'had acted like selfish prima donnas'; Ball, S. 'The Wind of Change as Generational Drama' in Butler, L. J. and Stockwell, S. (eds.), *The Winds of Change: Harold Macmillan and British Decolonisation* (Basingstoke: Macmillan, 2013), pp. 96-112.

The third section covers Sandys first few months at the Ministry of Defence in 1957, during which time he put together the 1957 White Paper on Defence. When he arrived at the Ministry of Defence in January 1957, Sandys was explicitly charged with overseeing the kind of thorough re-think he had previously advocated, and given increased powers in order to see it through. This concentration of power in the Minister of Defence, combined with Britain entering a period of uncertainty and upheaval following the Suez Crisis, allowed Sandys to draw heavily upon his personal experiences and conceptions of warfare when re-formulating British defence policy, provoking outrage from the Armed Forces and defence experts. In this section it is clearly demonstrated that Sandys had by this point developed a coherent strategic concept that was based upon the idea of unmanned weaponry proving impossible to defend against, and by analysing the different drafts of the White Paper produced over March and April 1957, Sandys' determination to deviate as little as possible from this core idea becomes apparent. In order to stay within designated word limits, this thesis is unable to address Sandys' defence review and subsequent policies in full. Instead, focus is given to what can be directly linked to his experiences of the Second World War, namely how his strategic concept emanated from his ideas about unmanned weaponry (to be equipped with thermonuclear weapons). Where otherwise significant issues such as conscription, colonial withdrawal, home defence, and naval warfare are discussed it is in relation to how Sandys himself linked them to his support for his primary policy preferences, such as his suggestion that Hong Kong did not require a colonial garrison as China could be deterred with strategic nuclear weapons, or his consistent opposition to the Royal Navy's attempts at increasing their role in plans for global warfare.

The fourth section maintains this focus in describing what might be seen as the negative aspects of Sandys' willingness to depend on his war experiences as a policy-making tool. After triumphantly publishing his White Paper in April, 1957, Sandys immediately found it difficult to actually implement the ideas it contained. Mounting costs and technological problems combined to see Sandys gradually lose control of the situation, finding himself sidelined by those eager to move away from what they considered to be a problematic weapons system - the Blue Streak medium range ballistic missile - and the policies he (and therefore the government) expected to base upon it. This section will address his time at the Ministry of Defence following the publication of the 1957 White Paper, and how he attempted to give proper consideration to alternative nuclear weapon systems without wishing to provide the government with

an excuse to lessen its commitment to Blue Streak and what he considered to be a meaningful definition of nuclear independence. The fifth and final section will be devoted exclusively to Sandys and Blue Streak, the British-built ballistic missile system he hoped would provide the nation with an independent nuclear capability beyond the lifespan of the manned bomber aircraft, and the failure of which he would become personally associated with. By following Sandys' involvement with the Blue Streak programme across both his period at the Ministry of Defence and the Ministry of Aviation, where he watched on as it was cancelled as a weapon system, it can be seen how Sandys did almost everything in his power to ensure that Blue Streak was a success, including resorting to underhand methods, to the extent that he was to end up being the only Minister willing to defend the programme before it was cancelled in April 1960, bringing to a close to the policies that he had based his defence plans upon.

The Intellectual Foundations of Sandys' Belief System

In August 1952, Sandys took it upon himself to question the official government belief that the recent spate of UFO sightings were merely a 'product of mass psychology'. He accepted that was no evidence of 'flying saucer aircraft' as such, but felt there was 'ample evidence of some unfamiliar and unexplained phenomenon'. The situation seemed familiar to Sandys, who had spent a large part of the Second World War tracking the development of unmanned German weapons, as well as attempting to coordinate the defensive efforts against them, and he felt the evidence of there being some as-yet unexplained object was 'quite as convincing as the half dozen vague and wholly inaccurate reports of the V.2 which was all that we had to go on in the Spring of 1943'. Furthermore, this was, he recalled, evidence that 'all our leading scientists declared to be technically impossible'. His recollection of what 'all our leading scientists' thought in 1943 was slightly inaccurate, but Sandys was the Minister of Supply at this point, responsible for equipping the Armed Forces with the latest weapons, and he was inclined to 'have no doubt at all' that a British pilot in Germany had witnessed a 'phenomenon similar to that described by numerous observers in the United States' rather than settle for the official verdict.[47] This curious example was part of a wider trend of Sandys falling back on his war experiences when forming his policy preferences, particularly when attempting to navigate a way through situations where adhering to a more established, routine way of thinking was deemed unsuitable, and in which individual policy preferences were allowed to thrive.

In order for this thesis to demonstrate how Sandys consistently returned to his personal belief system when heavily involved in the defence policy-making process, it is important that the intellectual foundations of this belief system have are first established. This section will attempt to do that by exploring Sandys' experiences in the Second World War, as well as analysing his later attempts across a range of platforms - particularly public statements and his contributions to various histories of the Second World War that touched on his responsibilities - at constructing them into a usable

[47] The letter in Sandys' archive is addressed simply to the 'Chief Scientist', but it is not clear which department the Chief Scientist in question belonged to. David Clarke has written that Sandys' letter was to 'The government's Chief Scientist, Lord Cherwell (Frederick Lindemann)'. Although this would be interesting in the context of Sandys' relationship with Cherwell, Cherwell was never the Chief Scientist, and Clarke cites the same document from Sandys' archive as this thesis as his source; Sandys to Chief Scientist: 12 August, 1952; the Papers of Duncan Sandys, Lord Duncan-Sandys (1908-1987); Churchill Archives Centre, Cambridge; DSND 15/4; Clarke, D., *The UFO Files: The Inside Story of Real-life Sightings* (Kew: The National Archives, 2009), p. 47.

belief system from which he could draw upon when later asked to provide solutions to long-standing issues in British defence policy.

The Second World War

On 11 April 1943, a report was circulated amongst the Chiefs of Staff documenting German technological developments over the past five years. It claimed that the Germans had started to focus on rocket development, rather than pilotless aircraft, which came as something of a surprise to the British government.[48] Within a matter of days, Prime Minister Winston Churchill received a minute from the Chiefs of Staff through its *de facto* secretary, and his personal military assistant, Hastings Ismay, that recommended an 'investigation directed by one man who could call on such Scientific and Intelligence Advisors as may be appropriate', and, should the evidence have amounted to anything, take responsibility for devising counter-measures. They urged Churchill to act without delay, and suggested that Sandys 'would be very suitable if he could be made available'.[49]

As of February that year, Sandys had been serving as the Parliamentary Secretary to the Ministry of Supply - a job which some felt he had acquired through his connections to Churchill, rather than on merit.[50] It does appear to have been the case that Churchill was often keen to promote Sandys on account of his personal connection to him, but in this instance he was more than qualified for the role.[51] The Chiefs of Staff would have known that before the war he had been a strong critic of the national air defences and war preparations, and that he had commanded an experimental anti-aircraft regiment of his own in Norway and Wales before injuries suffered in a car crash had removed him

[48] Ehrman, J., *Grand Strategy: Volume V, August 1943-September 1944* (London: HMSO, 1956), p. 308.
[49] DSND 2/10B (whilst Ehrman dates this message 14 April, this version contained in Sandys' archive is dated 15 April).
[50] David Edgerton describes the rocket programme as 'typically cronyist' in its recruitment, and David Irving writes that Bracken and Lord Cherwell, both Churchill favourites, grew jealous of 'the growing tendency of their Prime Minister to confide in his son-in-law'. Irving, however, adds that Sandys 'was unaware of the resentment his appointment caused'; Edgerton, D., *Britain's War Machine: Weapons, Resources and Experts in the Second World War* (London: Penguin Books, 2011), p. 109; Irving, D., *The Mare's Nest: The War Against Hitler's Secret Vengeance Weapons* (London: Panther Books, 1985), p. 51-52.
[51] Jock Colville, the Assistant Private Secretary to the Prime Minister during much of the Second World War, recorded occasions in July 1941 where Churchill had tried to make Sandys Financial Secretary to the War Office and then Under Secretary for Foreign Affairs. Colville described both these attempts as being motivated by nepotism; diary entries of 14 and 16 July, 1941 in Colville, J., *The Fringes of Power: Downing Street Diaries, 1939-1955* (London: Weidenfeld & Nicolson, 2004), pp. 359-60.

from active service.[52] This regiment, the so-called 'Z Battery', was a system designed to attack dive bombers with rockets, and its very existence had faced strong opposition from experts in the field.[53] He was also seen as the type of live influence required to work effectively between the intelligence services, government scientists, and the Armed Forces. His appointment was a serious one, worthy of the threat that the British government felt from these developments, which Adolf Hitler had come to regard as potential war-winners.[54] Plans for large-scale evacuations of the South East, as well as the transfer of government departments from London to relative safety, were quickly devised; but it was on questions of active defence against the new weapons that robust debate began to emerge.

By 17 May, Sandys had compiled a report for the Chiefs of Staff that was unable to offer a 'firm and final opinion' on exactly what the Germans were working on due to the lack of 'wholly reliable and conclusive' intelligence. However, owing to the urgency and seriousness of the matter, he offered some 'provisional answers' based on what information was available to him. He suggested that the Germans were in the process of developing a 'heavy rocket capable of bombarding an area with H.E. or gas from very long range' and that, whilst this would be 'extremely difficult' for the Germans, as well as representing a 'startling advance' on existing rocket technology, he deemed that this was 'technically quite possible'. He also said the economics of the project would not prove prohibitive in comparison to dropping an equal amount of explosives from aircraft, although this early belief was based on expecting a seventy ton rocket carrying ten tons of explosives.[55] The V-2s that eventually landed in Britain carried less than 10% of the explosives predicted, and weighed a fraction of what was expected; but Sandys was quite accurate in his predictions for the likely speed and altitude that they would reach, from which he concluded that such a weapon 'could not be intercepted or diverted once it had been launched'. Therefore, he argued that the most effective form of

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[52] He had spoken about Britain's vulnerability to aerial bombardment in the March, 1935, by-election that brought him into politics; see: 'Extract from Mr. Sandys' Speech - Adoption Meeting, 21 February, 1935'; DSND 13/16/1.

[53] Edgerton, *Britain's War Machine*, p. 110; Longmate, N., *The Doodlebugs: The Story of the Flying-Bombs* (London: Hutchinson, 1981), p. 31.

[54] Hitler told his generals that they would force Britain to surrender by the end of the year; Ehrman, *Grand Strategy: Volume V*, p. 306; Gerd von Rundstedt, however, told Liddell Hart that Hitler placed too much faith in the weapons, which warped his strategic thinking; Liddell Hart, B. H., *The German Generals Talk* (London: HarperCollins, 1971), p. 237.

[55] 'German Long Range Rocket Development: Interim Report by Joint Parliamentary Secretary, Ministry of Supply, 17 May, 1943'; DSND 2/4/1.

defence was to be found in disrupting the supply chain by bombing experimental establishments and any factories connected to their manufacture.[56]

The Chiefs of Staff were suitably impressed by the preliminary report, and Sandys was soon circulating more detailed reports as better intelligence became available.[57] His third report, of 28 June, was able to take advantage of a flood of new information from agents on the continent, new interrogations of prisoners of war, and aerial reconnaissance that Sandys had personally commissioned. He was able to conclude from this improved supply of information that the long-range rocket had 'undoubtedly reached an advanced stage of development'. The Germans were still thought to be having trouble with developing an accurate targeting system, but since Hitler wanted them as soon as possible in order to retaliate against Britain for bombing their heavy industries in the Ruhr, it was suggested that they could be forced into service before these issues were completely solved. The new photographic intelligence also led Sandys to revisit his technical predictions, writing that these weapons would probably carry anywhere between two and eight tons of explosives. Most importantly, he remained adamant that there was still no direct means of defence against them. This was especially concerning for the government as the Ministry of Home Security had completed a study, based on each rocket boasting ten tons of explosive power, that predicted 4200 casualties (600 dead) following each attack on London. If this happened every hour of every day for a month, the report had suggested that 'the virtual destruction of the metropolis' would ensue.[58]

Sandys did not completely endorse those figures, but conceded that even half that amount of damage would gravely compromise the capital. 'Undoubtedly the most effective way to prevent the use of this weapon', he wrote, was to attack the rockets at their source. Therefore he had recommended to the Air Ministry that they launch a heavy bombing raid against the Peenemünde Army Research Centre with the object of 'utterly destroying' the buildings and of 'killing as many as possible of the scientists and technicians in the living quarters nearby'.[59] He repeated this recommendation to the

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[56] *Ibid.*
[57] 'Minutes for Chief of Staff Committee Meeting, 20 May, 1943'; DSND 2/4/1.
[58] 'German Long Range Rocket: Third Interim Report by the Joint Parliamentary Secretary, Ministry of Supply, 28 June, 1943'; DSND 2/4/1.
[59] *Ibid.*; Britain had first learned of Peenemünde and its purpose from the so-called 'Oslo Report', a massive leak of German military secrets passed on to British authorities at the outbreak of the war, which, according to R. V. Jones, 'was probably the best single report received from any source during the war';

Defence Committee on 29 June, informing them that the Air Staff had said it would not be possible to launch a 'really heavy' night attack until August.[60] It was here that the so-called 'Scientific Controversy' first emerged. Churchill's scientific advisor, Frederick Lindemann - better known as Lord Cherwell - gave his opinion that 'the rocket story was a well designed cover plan', and that it was 'almost incredible that the Germans should have got, without an intermediate step, to something which we could certainly not develop under five years'. Cherwell also doubted the prisoner of war reports that spoke of new propellants, claimed a single-stage rocket could not travel more than forty miles, and described the whole issue as an 'elaborate cover plan to conceal some other development'. He said stories about rockets 'had been going the rounds for years', which he argued made a fake rocket programme the ideal basis for a hoax.[61]

When opening the Defence Committee meeting Sandys had anticipated Cherwell's line of objection by making a point of ruling out a hoax as 'far-fetched', owing to the sheer number of people that would have had to have been primed with false information to make it believable. Additionally, whether or not a rocket was being manufactured there, Peenemünde was still known to be an important research establishment, so to 'invite the heaviest bombing' upon it by allowing dummy rocket casings to be photographed would have been 'illogical' in his view. Churchill, whilst taking the technical points Cherwell had made on board, sided with Sandys. So too did R. V. Jones, the scientific intelligence expert from the Air Ministry, who said the evidence for the rocket programme existing was conclusive, and that the Germans were not capable of such a deception.[62] It was decided that a heavy attack should be mounted against Peenemünde, but Charles Portal, the Chief of the Air Staff, said this should wait until the Germans had finished whatever it was they were building there. Portal also suggested that it was better to wait until sufficient strength could be mobilised to completely destroy the facility and kill as many scientists as possible, where as an earlier attack might prove indecisive and simply force the Germans into moving production to a more secure location. His Army and Navy colleagues agreed, as did Churchill, and a 'heavy scale air attack' was approved 'as soon as conditions permit'.[63]

Jones, R. V., *Reflections on Intelligence* (London: Heinemann, 1989), p. 275; see also: Collier, Basil., *The Defence of the United Kingdom* (London: Her Majesty's Stationary Office, 1957), p. 331.

[60] 'Minutes of the Defence Committee (Operations), 29 June, 1943'; DSND 2/4/1.

[61] *Ibid.*

[62] *Ibid.*

[63] *Ibid.*

A message from the British Embassy in Switzerland was also circulated to those present, informing them that Germany had been promising its citizens a 'devastating and decisive air attack' against Britain in August that would be both 'novel in method and irresistible in intensity'. This seems to have influenced Sandys' mood and in his next report he spoke of 'an impending rocket attack upon London'.[64] The technical difficulties would, he felt, probably make the rockets 'erratic', and, unless Hitler forced them into early service, not likely to be used 'until next year at least'; but once again, he argued that the 'only immediate counter measure' was to bomb Peenemünde.[65] Cherwell used the next War Cabinet meeting to reiterate that the likelihood of Germany solving the 'formidable' technical difficulties remained 'remote', as well as explaining why it was pointless to embark on a new programme of shelter construction. The velocity of the rockets would be such, he said, that in the event of a successful attack 'all fragments would be projected straight into the ground', reducing their effectiveness.[66]

In August, Sandys acquired a 'new and reliable source' that said rockets were being 'manufactured in quantity' at a number of facilities, as well as further evidence of the movement of suspicious tubes that he believed could only be connected 'with the latest German secret weapon'.[67] The heavy bombing raid on Peenemünde, the only precision night attack attempted by Bomber Command in the latter half of the war, took place on 17/18 August, and the precise results of the raid are still a matter of dispute.[68] The official history describes the attack as having done 'good service to the Allied cause', where as Michael J. Neufeld has said the raid was ineffective, with the main result being, as Portal had predicted, to force the programme into underground facilities to the benefit of the *SS* and their inhumane methods.[69] Walter Dornberger, who oversaw Germany's unmanned weapons programmes, later wrote that the raid set work back no

[64] The message was received on the morning of 29 June, but Sandys' copy is dated 1 July; 'From Berne to Foreign Office: 29 June, 1943'; 'German Long Range Rocket: Fourth Interim Report by the Joint Parliamentary Secretary, Ministry of Supply, 9 July, 1943'; DSND 2/4/1.
[65] 'Fourth Interim Report'; DSND 2/4/1.
[66] 'Extract from Chiefs of Staff Committee: 15 July, 1943'; DSND 2/4/2.
[67] 'German Long Range Rocket: Eighth Interim Report by the Joint Parliamentary Secretary, Ministry of Supply, 6 August, 1943' and 'German Long Range Rocket: Ninth Interim Report by the Joint Parliamentary Secretary, Ministry of Supply, 14 August, 1943'; DSND 2/4/2.
[68] The loss of forty aircraft – 6.7 per cent of the force - was considered an acceptable loss; Everitt, C., Middlebrook, M., *The Bomber Command War Diaries: An Operational Reference Book, 1939-1945* (New York: Viking, 1985), pp. 422-424.
[69] Collier, *The Defence of the United Kingdom*, p. 349; Neufeld, M. J., *The Rocket and the Reich: Peenemünde and the Coming of the Ballistic Missile Era* (Cambridge, MA: Harvard University Press, 1995), pp. 198-200.

more than two months.[70] Before the raid Sandys had judged that Peenemünde was capable of manufacturing at least one rocket a day, but the attack had at least appeared to put that particular facility out of action. However, there were still a number of active facilities, and special interest was taken in a suspicious-looking bunker in Watten, that Sandys thought worthy of bombing attacks.[71] The United States took on the task of attempting the precision bombing this small site in daylight, and it was repeatedly bombed until Allied forces captured it in September 1944.

In his post-Peenemünde report Sandys suggested that it might be a good idea to spread rumours in neutral countries that 'the secret weapon upon which Hitler placed so much reliance' had been destroyed, with the intention of provoking the Germans into making a reply that would furnish him with more knowledge.[72] The Chiefs of Staff advised against letting the enemy know just how much they knew.[73] They were happy enough with the raid, which Portal reckoned had set the programme back six months.[74] Cherwell remained sceptical about what had been accomplished, and continued to doubt that the Germans even had a rocket programme. Reports of a different weapon were beginning to emerge by this point, and as Portal told the Chiefs of Staff Committee, a pilotless aircraft had been seen to make a crash landing on 22 August near Peenemünde, which made this the immediate priority. Cherwell did not doubt the existence of this pilotless aircraft, but said such a weapon would be an inefficient means of bombing Britain. Jones said the Germans had the capability to attack Britain with pilotless aircraft, and Sandys confirmed he was already investigating them. He did not consider them as threatening as long-range rockets, since they would either have similar performance to fighter aircraft, 'in which case it would present few difficulties and could be shot down by our fighters', or they would match the rockets in performance and not really represent a different problem.[75]

Sandys felt that his attentions would be better utilised by focussing solely on countering the German rocket programme and that aircraft of any sort were better off in

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[70] Dornberger, W., *V2* (New York: Viking Press, 1954), pp. 163-64.
[71] 'German Long Range Rocket: Tenth Interim Report by the Joint Parliamentary Secretary, Ministry of Supply, 21 August, 1943'; DSND 2/4/2.
[72] *Ibid.*
[73] 'Chiefs of Staff Committee: German Long Range Rocket Development, 26 August, 1943'; DSND 2/4/2.
[74] 'War Cabinet: Chiefs of Staff Committee, 31 August, 1943'; DSND 2/4/2.
[75] *Ibid.*

the hands of the Air Ministry.[76] In September he arranged an informal separation of his committee into investigating the pilotless aircraft (flying bomb) and the long-range rocket separately, but by October the arrangement was proving difficult to manage. In November this confusion was solved when the Air Staff assumed control over everything; but Sandys maintained his place at the table when the issues were discussed in the War Cabinet in order that 'the wide contacts which had been established by Mr. Duncan Sandys in various Government Departments should be maintained'.[77]

Within less than a year, the small sub-committee first tasked with investigating German unmanned weapons developments had become a vital part of the Air Ministry, boasting ties to the Joint Intelligence Committee and the Ministry of Home Security. However, Sandys found it difficult to successfully counter the German unmanned weapons programmes. Even attacking research facilities was an inefficient use of resources. This was admitted by Sandys on 10 August 1944, when he told the War Cabinet that 'on the whole, the results achieved by these attacks had not been commensurate with the air effort involved'. On the other hand, he claimed that 'attacks on the supply system had gained appreciable results in interfering with and restricting the enemy's scale of attack'.[78] This was captured in memorandum by Air Vice-Marshal Trafford Leigh-Mallory, Air Commander-in-Chief of the Allied Expeditionary Force, that closed the year by saying 'No single weapon is likely to provide the complete answer', and that 'Attacks on installations are the primary means of defence'.[79] The potential threat of the weapons, combined with the difficulties of defending against them, created a danger that could only be overcome by removing them from the equation completely, and doing so at all costs. To this end, the Chiefs of Staff were requested on 20 January 1944 to prepare a report as to whether gas attacks might be utilised against launching sites 'in the event of the attacks on this country based on those sites becoming too damaging'. This was accompanied by the absolutist statement from

[76] Hinsley, F. H., *British Intelligence in the Second World War: Its Influence on Strategy and Operations - Volume Three, Part I* (London: Her Majesty's Stationary Office, 1984), p. 337; see also: Ehrman, *Grand Strategy: Volume V*, pp. 309-10.
[77] 'Responsibility for Intelligence for "CROSSBOW": 3 January, 1944'; DSND 2/3/1.
[78] DSND 2/3/9; in total, the Allies devoted only two per cent of their entire bombing weight to V-weapon launching sites, although this was still more than the amount dropped on specific aircraft factories during the entire war; MacIsaac, D., *Strategic Bombing in World War Two: The Story of the United States Strategic Bombing Survey* (London/New York: Garland Publishing Inc., 1976), p. 158.
[79] '31 December, 1943'; DSND 2/3/9

Churchill: 'Moral and political considerations should not be taken into account in preparing this report'.[80]

Throughout the existence of the various Sandys committees, which eventually became known as Operation CROSSBOW, and was directly charged with defending Britain from unmanned German weapons, there remained no definitive solution to the problems encountered. When the V-1 flying bombs began to strike Britain in June 1944, Sandys remained fixated on attacking supply sites. He was supported in this view by the Air Staff, who were always happy to bring their bombing strength to bear in order to further demonstrate its worth.[81] In truth, whilst local defensive efforts managed to down significant numbers of V-1s, it was the advance of the Allied armies through Nazi-occupied Europe that put a stop to the flying bomb attacks, even though the official history claims that 'the "battle of the bomb" was not won by offensive counter-measures, but by the defences'.[82] With the Allies beginning to establish a foothold in Northern France, and local defences getting to grips with their new challenge, Sandys was able to report to the War Cabinet that:

> With regard to our defences the present position was that on an average we were able to destroy 41% of the bombs launched and it might be that, as improvements were made in the equipment of our aircraft and guns and as the skill of the pilots and gunners increased, we should be able to bring up the average to 50% in the next few weeks.

[80] *Ibid.*; Churchill told the War Cabinet on 18 July, 1944, when Allied soldiers were situated on the continent, that 'if the rocket attacks should develop, he was prepared, after consultation with the United States and the U.S.S.R. to threaten the enemy with large scale gas attacks in retaliation should such a course appear profitable'; DSND 2/3/8.

[81] Examples: 7 and 8 February, 1944, DSND 2/3/2 and 26 May, 1944, DSND 2/3/3; the first V-1 hit London on 13 June, 1944, and three days later the Home Secretary, Herbert Morrison, told the Commons that Germany had used 'this much-vaunted new weapon'; Hansard, House of Commons Debates; HC vol 400 col 2301 (16 June, 1944).

[82] Collier, *The Defence of the United Kingdom*, p. 389; Alan Brooke, the Chief of the Imperial General Staff, wrote about the campaign against the V-2 in his diary on 23 February 1945: 'It is pretty clear that no action has much effect on this form of enemy attack. Our increased air measures have only resulted in additional bombs!! There is only one way of dealing with them and that is by clearing the area from which they come by ground action, and that for the present is not possible'; Brooke, A., Danchev, A. and Todman, D. (eds.), *War Diaries: 1939-1945* (London: Phoenix, 2001), p. 665.

> Taking everything into account he thought that we might reduce the weight of explosives dropped in London from 50 tons to 30 tons a day; but we ought to be prepared to face attacking on this scale for several months.[83]

Churchill reacted to this unspectacular statement with a suggested counter-measure of his own, wondering 'whether we should not publish a list of, say, 100 of the smaller towns in Germany, where the defences were likely to be weak, and announce our intention of destroying them one by one by bombing attacks'. It was left to the Secretary of State for Air, Archibald Sinclair, to politely remind him that half of all Allied air power was at that point engaged against the flying bomb 'and that it would be extremely difficult to spare additional resources from the Battle of France'. He also suggested that 'there was a grave risk that attacks of the kind indicated by the Prime Minister would lead to reprisals in the form of the shooting of any air crews who fell into German hands'.[84]

The last flying bomb was launched on 5 September, by which point the retreating Germans were having to launch them from specially-adapted Heinkel 111s, and British defences had destroyed 3463 the missiles out of 6725 observed and about 9000 launched.[85] Although defences against flying bomb attacks had improved, there would be no answer to the impending V-2 rocket. When the V-2 was unleashed by the Germans, its promise was immediately recognised by Sandys. It had no fixed launch sites to destroy or capture, it was ten times as fast as most fighter planes, and its development potential was straight away deemed to be unlimited. Sandys had been vindicated, although Cherwell had been correct about the size of the rockets eventually launched. Sandys had originally briefed the War Cabinet about a weapon half as long, twice as wide, six times as heavy, and ten times as explosive as what was eventually produced.[86] However, as early as January 1944 Sandys was able to revise his previous predictions and report that 'the explosive load was much smaller than had been previously expected', and that the technical problems posed by long-range rockets meant production would be 'limited'.[87]

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[83] '3 July, 1944': DSND 2/3/6.
[84] In spite of this, 'There was general agreement that the question raised by the Prime Minister should be considered'; *Ibid.*
[85] Collier, *The Defence of the United Kingdom*, p. 385.
[86] *Ibid.*, p. 343.
[87] 'Extract from Chiefs of Staff Committee Meeting: 11 January, 1944'; DSND 2/3/1.

Despite being correct about there being no hundred ton rockets in existence, as well as identifying other issues the Germans were to face, Cherwell has gone down in history as the man who was proven wrong, famously saying in October 1943, that 'at the end of the war, when we know the full story, we shall find that the rocket was a mare's nest'.[88] There is evidence to suggest that Cherwell allowed his views on the German rocket programme to be influenced by his personal dislike of Sandys. Jones would later recall that this may have 'coloured' his perspective, but thought it was more a case of him not wishing to see Britain back on the defensive.[89] One of Cherwell's biographers, however, believes that his position was influenced by his 'disdain' for Sandys, evident in the private minutes Cherwell addressed to Churchill, and that he held Sandys' comparatively limited scientific knowledge in contempt.[90] Jones, although never appearing to have had a personal dislike of Sandys, had some sympathy with this idea, writing that he was confused as to why, in recommending Sandys, the Chiefs of Staff had overlooked his fellow scientists 'to do a job that we already had in hand, and for which our qualifications were much better'.[91] Jones had believed in the German rocket from the beginning, but it is clear that Sandys was not his ideal partner. He accused him of taking the credit for spotting a rocket on an aerial photograph after Jones had brought it to his attention, and of wildly over-estimating the weight of the rockets.[92]

Whilst Sandys never published his version of the story as Jones did, his archive contains a number of files containing copies of important documents relating to his war work that he would distribute to those seeking his version of events. Historians who contacted him would receive a copy, as did the producers of the 1965 motion picture *Operation Crossbow*, in which Sandys was portrayed by Richard Johnson as a tireless man of action constantly having to battle against Trevor Howard's dismissive and superior Cherwell. Amidst the reproduced committee minutes and reports is a brief essay titled *The Scientific Controversy*, which would appear to be one of the few things Sandys ever wrote about his war experiences. In this he pits 'all our rocket experts', who supposedly subscribed to the theories of technical impossibility and German deception, against those who had considered the 'inescapable evidence that the Germans had developed a rocket', but, 'Not being rocket experts', did not advance any theories on how

[88] Hinsley, *British Intelligence...*, p. 398.
[89] Jones, R. V., *Most Secret War* (London: Penguin, 2009), p. 335.
[90] Fort, A., *Prof: The Life of Frederick Lindemann* (London: Jonathan Cape, 2003), pp. 287-88.
[91] Jones, *Most Secret War*, p. 335.
[92] *Ibid.*, pp. 341-43.

they had done so. There are no names mentioned. It does not say that Jones and others believed in the rocket. But the use of the deliberately vague term 'rocket experts' in contrast to those who happened to make the same points as Sandys, which would have been apparent to anybody reading the selection of documents the file contained, implies that it was very much a case of Sandys against the conservative scientific elite. The piece gives the 'experts' their due in doubting that any rocket would be as big as the believers - Sandys - had originally predicted, but that is explained away as the results of bad scientific intelligence relating to the fuel the rockets were expected to use, which was only rectified when the United States began its own experiments into new propellants.[93] This unpublished piece of writing neatly captures both the image Sandys came to construct of his contribution to the war effort, and the way he would come to jealously guard his role in the story.

The V-2, as it turned out, proved remarkably ineffective relative to its costs. Neufeld compared the V-2 to aircraft-led strategic bombing and deemed it 'pathetic', going so far as to claim that the efforts made by the Germans to develop the V-2 meant that 'German missile development shortened the war, just as its advocates said it would, but in favour of the Allies'.[94] Nevertheless, Churchill informed Parliament of this latest threat on 10 November 1944, and by 23 November, Sandys had issued a report to the War Cabinet, two days after he had showed it to the Chiefs of Staff.[95] In this Sandys reported the lack of 'effective counter-measures' against a weapon that 'attains a velocity of about 3,500 m.p.h. and rises over 60 miles into the stratosphere'. As well as these attributes, which made shooting them down impossible, 'all efforts to interfere with its radio control mechanism have as far proved fruitless'.[96] These qualities instantly impressed Sandys, and the critical paragraphs for understanding the positions he would later take in government are as follows. Under the heading 'British Rocket Development', he

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[93] 'The Scientific Controversy', date unknown; DSND 2/10C.
[94] 'The total explosive load of all A-4s fired in anger was scarcely more than a single large RAF raid!'; Neufeld, *The Rocket and the Reich*, pp. 273-74.
[95] 'For the last few weeks the enemy has been using his new weapon, the long-range rocket, and a number have landed at widely scattered points in this country. In all, the casualties and damage have so far not been heavy, though I am sure the House would wish me to express our sympathy with the victims of this as of other attacks. No official statement about the attack has hitherto been issued. The reason for this silence was that any announcement might have given information useful to the enemy, and we were confirmed in this course by the fact that, until two days ago, the enemy had made no mention of this weapon in his communiques'; Hansard HC vol 404 col 1653 (10 November, 1944).
[96] War Cabinet "CROSSBOW" Committee: Seventeenth Report by the Chairman, 23 November, 1944; DSND 2/3/6.

described what had been seen as 'only for fore-runners of other long distance bombardment weapons', whose effectiveness 'could be appreciably increased':

> 36. The advent of the long-range, radio-controlled, jet-propelled projectile has opened up vast new possibilities in the conduct of military operations. In future the possession of superiority in long distance rocket artillery may well count for nearly as much as superiority in naval or air power.
>
> 37. The Americans have already embarked upon an ambitious programme of development and there are signs that the Russians are also impressed with the potentialities of this new technique. If Great Britain is not to risk falling behind other nations in this vital sphere, high grade scientific and engineering staff together with extensive research facilities will have to be provided and maintained as a permanent part of our peace-time military organisation.[97]

In his role as Joint Parliamentary Secretary to the Ministry of Supply, Sandys was partly responsible for the deployment of scientific manpower. This meant that he happened to be fully aware of Britain's involvement in the construction of nuclear weapons as part of the United States-led Manhattan Project.[98] Although he could not mention this when writing this kind of report, Sandys' predictions may also have kept in mind the looming possibilities of these new weapons. However, that does not diminish what, with the benefits of hindsight, became obvious: that the progress of unmanned weaponry was inexorable. Whilst Sandys was not the only person to quickly recognise the potential of unmanned weaponry, we shall see in the subsequent sections how he was the first leading policy-maker to promote the idea of placing it at the centre of British defence planning.[99] It was, therefore, a short step for him to then conclude that

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[97] *Ibid*.; according to the official records, the American missile programme, codenamed 'Hermes', began on 15 November, 1944. It is difficult to say how 'ambitious' it was by this stage, or, indeed, how Sandys came to know about it; *A Chronology of Missile and Astronautic Events: Report of the Committee on Science and Astronautics, U.S. House of Representatives, Eighty-Seventh Congress, First Session* (Washington: U.S. Government Printing Office, 1961), p. 7.

[98] For example, he sat in on a 9 February, 1944, meeting that released scientists from war work in Britain so that they could head contribute to the British-Canadian Tube Alloys project; DSND 2/13; he referred to this knowledge during a 12 October, 1948, speech; 'Speech at a public meeting at St. Leonards Parish Hall, Streatham - 12, October, 1948'; DSND 16/2.

[99] Neufeld concludes that the V-2 came 'too early', since it pre-dated nuclear warheads and effective electrical components; Neufeld, *The Rocket and the Reich*, p. 275; Alexander P. de Seversky, an influential early advocate of what became strategic bombing, spoke in 1947 about a possible future of 'robot planes' and 'guided rockets', which he did not rule out, but claimed an inter-continental missile

on top of being able to reduce capital and human costs through manning equipment instead of equipping men, to use the famous maxim, the possession of offensive unmanned weaponry was a potential short-cut to superpower status, just as 'superiority in naval or air power' had been in previous years.

In addition to this, there was another angle in this discussion. Sandys came to the view that possessing the dominant weapon of the future had a clear political dimension in terms of credibility. The Political Warfare Executive had addressed the psychological nature of the weapons in a January 1944 report which foreshadowed the value Sandys later attached to the independent nuclear deterrent. The key passage of the report reads:

> Furthermore, the long term effect of building up a threat [to retaliate] which we have no intention of fulfilling would be harmful to us. Our failure to retaliate would be attributed by the Germans to our impotence and to German power, and might increase the morale-raising effect of the use of 'CROSSBOW'.[100]

Two weeks later this was accompanied by suggestions of a domestic political value when a report from the Air Staff claimed that the weapons were providing effective propaganda for the Germans, who boasted to their people that they were preventing the Allies from attempting their long-awaited invasion of Western Europe, just as the nuclear deterrent, whether through an independent British variety, or being protected by the United States nuclear umbrella, would come to base its existence on stopping the superior conventional forces of the Soviet Union from sweeping through the same area during the Cold War.[101] This claim was supported by the definitive *United States Strategic Bombing Survey*, which is worth quoting at length. Under the heading 'Retaliation Weapons as a Morale Stimulant', it reads:

'would have to weigh roughly 400,000 tons, or the equivalent of four battleships'. Even if rockets might have been reduced 'from four battleships to one cruiser', Seversky felt 'the time is very far off, if it ever comes at all'; De Seversky, A. P., 'A Lecture on Air Power - Part I' in *Air University Quarterly Review*, Vol. 1, No. 2 (Fall, 1947), p. 30; De Seversky, 'A Lecture on Air Power - Part II' in *Air University Quarterly Review*, Vol. 1, No. 3 (Winter, 1947), pp. 24-27; Vannevar Bush, the foremost American scientific policy-maker of the Second World War, used his 1949 *Modern Arms and Free Men* to warn against 'eminent military men, exhilarated perhaps by a short immersion in matters scientific' having heightened expectations of the potential development of V-2-style weapons; Bush, V., *Modern Arms and Free Men: A Discussion of the Role of Science in Preserving Democracy* (Cambridge: The M.I.T. Press, 1968), p. 85.

[100] 'Report by the Political Warfare Executive: 1 January, 1944'; DSND 2/3/1.

[101] 'Second Report by Assistant Chief of Air Staff (Intelligence), Appendix "B": German Propaganda and a Secret Weapon, 15 January, 1944'; DSND 2/3/6.

> One of the great stimulants to morale applied by the Nazi leaders was the promise of retaliation and secret weapons. The purpose, partially realized, was to strengthen the people's will to hold out and convince them of the possibility of a final German victory. There is evidence that as the air raids grew heavier in 1944, faith in the eventual application of the new weapons was the main sustaining hope of many Germans. Until the invasion, the desire for retaliation was closely tied up with the air war, while after June 1944 it was associated with the hope of defeating the enemy attack in the West.[102]

This would later be reflected by Sandys during the years in which British superpower claims were based on increasingly unstable foundations. The years during which Sandys occupied important roles in the defence policy-making process, 1951-54 and 1957-60, were critical years for Britain in this respect. Whether it was through the frustrated defence reviews of the early fifties aimed at putting British defence policy on a more viable financial footing, or through his own attempts to radically overhaul defence policy following the Suez Crisis, Sandys increasingly came to identify unmanned nuclear weaponry as the 'main sustaining hope' for a Britain seeking to remain as a serious contributor to the defence of the West. The *Strategic Bombing Survey* continued:

> When the V-1 was finally launched, its daily use was closely followed, and the absence of any mention of it in the communiqué for a day or two aroused the greatest anxiety. Furthermore, the air raids caused great fear that the factories producing the V-weapons might be hit and their production either rendered impossible or so delayed as to render them ineffectual.
>
> Late in 1944 and in 1945 the people seem to have lost all hope of winning the war. Their mood was one of complete demoralization bordering on panic. The inability of the V-1 and V-2 rockets to halt the air raids or to interfere with the Allied advances in the West removed their last hope. The question which naturally arises is how and why they kept working. The

[102] *The United States Strategic Bombing Survey: Volume IV* (London/New York: Garland Publishing Inc., 1976), p. 44.

> morale reports do not attempt to answer that question, except for occasional suggestions that propaganda was influential.[103]

This would again be reflected by Sandys in later years. His predilection for seeing the independent nuclear deterrent as both a genuine alternative to so-called conventional armaments as a foundation for British defence, as well as a political symbol to justify his strategic re-alignment, clearly drew on these influences. The independent nuclear deterrent, whilst the result of gradual developments in doctrine, became the main political issue in defence because of Britain's newly exposed weakness. Britain's conventional forces could, in theory, be destroyed; but as long as Britain retained its place as a nuclear weapons state, it remained a nation of major importance, and one that the Soviet Union had to give proper consideration. That the weapons became the 'main sustaining hope' of the Germans would later justify Sandys' admission that Britain could not hope to defend itself against nuclear attack, presenting Britain's own nuclear force as the only possible response. This was the case in Germany, where the *Strategic Bombing Survey* found that use of rockets 'found a passionate echo and have strengthened the population in its belief that the use of the retaliatory weapon is an answer to the technical superiority of our enemies'.[104]

In Opposition

Prior to the Second World War Sandys had opposed appeasement, but he had never really done so with any vigour.[105] He used his maiden speech to criticise the idea of an anti-German alliance in Europe that 'could, at the most, hope to maintain an unhealthy and precarious state of armed peace'. He thought instead that Britain should have allowed Germany to dominate continental Europe in exchange for not pressing the 'Colonial and naval question', which he considered to be the main British interests.[106] Churchill issued a forty minute rebuke to the new Member, concluding that his idea 'has only to be stated to be rejected'.[107] Rather than merely being pro-German, it could be suggested that Sandys was not wholly unsympathetic to National Socialism. In the

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[103] *Ibid.*
[104] *Ibid.*, p. 49.
[105] N. Piers Ludlow, author of Sandys' entry in the *Oxford Dictionary of National Biography*, writes that 'Sandys's reputation as a critic of appeasement was sometimes later overstated'; Ludlow, N. P., 'Sandys, (Edwin) Duncan, Baron Duncan-Sandys (1908–1987)', *Oxford Dictionary of National Biography* (Oxford University Press, 2004; online edition, January, 2008).
[106] Hansard HC vol 301 cols 595-97 (2 May, 1935).
[107] Hansard HC vol 301 cols 598-611 (2 May, 1935).

closing stages of the Second World War the left-wing magazine *Tribune* published what they called an 'exposure' of Sandys, who they described as a 'young Tory statesman with prospects of a dazzling career', and somebody who had gone further than most in the pre-war Conservative Party in voicing 'pro-Nazi sympathies'. In support of this they published extracts from articles Sandys had written for a German magazine in July and October 1936, which they claimed had never been seen in Britain before. Naturally his words were stripped of any context, but it is difficult to see how passages such as the following could have been softened by whatever else might have been included in the original piece:

> The German people observed with growing anxiety how one key position after another passed under the control of Jews... But what made the situation doubly unbearable for the self-respecting people was the kind of Jew that got to the top, and their political and social views. The Jewish war profiteer and Jewish Socialist adventurer obtained control over the lifestream of the nation.[108]

The article mentioned that 'pro-Nazi sympathies' were not uncommon in the Conservative Party, and Sandys' writings included the kind of anti-communist arguments that were often made in support of Germany during the 1930s; but *Tribune* was right to say Sandys appeared to go further than his colleagues on account of his referring to the 'obvious blessings which National Socialism brought to Germany', and in attempting to dismiss criticism of Nazi Germany as little more than 'disdainful remarks - made on the basis of completely wrong information - about the character of German labour camps'.[109] Before entering politics Sandys had briefly worked in Berlin on behalf of the Foreign Office, which may go some way towards explaining his sympathies for Germany, having given him a certain amount of knowledge relating to the domestic situation prior to Hitler coming to power. However, whilst at the Foreign Office he had also visited the Soviet Union in 1931. Under the guise of a more general tour, he was actually gathering information about Soviet air routes for the Air Ministry, and his visit was wide-ranging enough for him to conclude that 'the whole fabric of the State in its political, economic and cultural aspects differ fundamentally from those with

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[108] 'Duncan Sandys - An Exposure'; *Tribune*: 22 June, 1945; strangely this article is contained in Sandys' archive having been reproduced on Ministry of Aviation-headed paper. The purposes of this reproduction are unclear; DSND 7/2.
[109] *Ibid.*

which we are acquainted elsewhere'.[110] This would explain his stance from an anti-communist perspective; but on one occasion he witnessed the transportation of political enemies by trains, which he reported had convinced him of the 'utter ruthlessness of Soviet methods and of their callous disregard for human suffering'.[111] This would seem like a natural reaction to such a sight; but he must have been aware that propaganda emanating from the Soviet Union would have dismissed this in the way that he would later dismiss those calling the character of German labour camps into question. This would at the very least suggest a certain wilful blindness on his part, although such an interpretation may serve to give what could well have been outright apologist tendencies the benefit of undeserved doubt.

His eventual shift towards the Churchill position may well have simply been down to the fact that four months later he married Churchill's eldest daughter, Diana. That said, he would prove at various moments that he was still capable of distancing himself from Churchill when it suited his immediate political concerns.[112] During the war, however, he managed to go beyond what even Churchill considered to have been a reasonable strategy for the destruction of German war-making capacity. Jock Colville, the Assistant Private Secretary to the Prime Minister, recorded Sandys' comments over dinner in March 1941. With Charles de Gaulle and Robert Menzies, the Prime Minister of Australia, present, Sandys revealed that his preferred strategy was 'to destroy Germany by laying the country waste and burning towns and factories'. This was not a particularly bold statement to make in 1941, and his hope that 'for years the German people might be occupied by reconstruction' was no more outlandish. What made Sandys' position extreme was his wish 'to destroy their books and libraries so that an illiterate generation might grow up'. The nature of this suggestion was captured by Colville when he added that Churchill was 'in no way moved' by Sandys, describing his ideas as 'not applicable to modern conditions'.[113]

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[110] DSND 1/2.
[111] *Ibid.*
[112] Thompson, N., *The Anti-Appeasers: Conservative Opposition to Appeasement in the 1930s* (Oxford: Clarendon Press, 1971), p. 24 and 198; Parker, R. A. C., *Chamberlain and Appeasement: British Policy and the Coming of the Second World War* (London: Macmillan, 1993), p. 187 and 289; Charmley, J., *Churchill: The End of Glory - A Political Biography* (London: Sceptre, 1995), p. 356; for Sandys' previous loyalty to Churchill see Olson, L., *Troublesome Young Men: The Rebels Who Brought Churchill to Power in 1940 and Helped to Save Britain* (London: Bloomsbury, 2007), p. 76.
[113] 8 March, 1941; Colville, *The Fringes of Power*, pp. 312-13.

It would appear that Sandys' policy preferences were still in their infancy at this point in his career, but there are traces of his all-or-nothing attitude in these early positions, as well as an ability to disregard information that refused to fit his preconceived notions. Following the 1945 Labour landslide, when Sandys remained heavily involved with the defeated Conservative Party, Churchill had wanted to put him in charge of the Conservative Research Department, but the informal Shadow Cabinet fought to prevent it.[114] Instead he occupied his time away from the House of Commons by leading the United European Movement, a precursor to the European Movement, where he was responsible for soliciting covert funding from a United States government eager to see Western Europe united against Soviet communism.[115] Sue Onslow has written about the Conservative Party and Europe at this time, and she casts Sandys as the decisive influence on turning Churchill towards Europe. Letters of introduction from Churchill opened most doors on the continent, where he was apparently left mostly to his own devices in organising Churchill's level of involvement, and in doing so he was typically assertive. On one occasion when Churchill sent him a draft of his speech to comment upon, Sandys wrote a new one for him. When Churchill asked for his original speech to be returned, Sandys told him he had torn it up, and Churchill was forced to deliver an amended Sandys speech.[116] However, whilst Churchill sought a United Europe which the British Empire could provide with an influential link to the United States, Sandys had come to the conclusion that granting independence to India had essentially brought the British Empire to a close. As a result, he felt that a close alliance with the United States would lead to subordination and a lack of influence over Western military policy. The answer, therefore, lay in a Europe that had gone through a phase of full economic and military integration in order to emerge as a rival to the United States.[117]

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[114] John Ramsden has written that the party leadership 'had quite a fight to stop this idea going through', but does not say why. Presumably they considered that he would not have been suitable for a position dependent on collecting and compromising between alternative viewpoints; Ramsden, J., *The Age of Churchill and Eden, 1940-1957* (London: Longman, 1995), p. 144.

[115] Ramsden says that 'there were certainly members of his (Churchill's) Cabinet such as Macmillan, [David] Maxwell Fyfe and Sandys who were already committed to a European future for Britain as a result of their own war experiences'; *Ibid.*, p. 144 and p. 260; for Sandys and American funding, see: Aldrich, R. J. 'OSS, CIA and European unity: The American committee on United Europe, 1948-60' in *Diplomacy & Statecraft*, Vol. 8, No. 1 (1997), pp. 184-227.

[116] She cites one source as saying 'the man was a steam roller - he would grind away in first gear and nothing could stand in his path'; Onslow, S., *Backbench Debate within the Conservative Party and its Influence on British Foreign Policy, 1948-57* (London: Macmillan, 1997), p. 18; see also: Jenkins, R., *Churchill* (London: Macmillan, 2001), p. 814; Beloff, M. 'Churchill and Europe' in Blake, R. and Louis, R. Wm. (eds.), *Churchill* (Oxford: University Press, 1993), p. 449.

[117] Onslow, *Backbench Debate*, p. 23; Sandys saw a European Army as the answer to the question of how to re-arm Germany, and ensure their support for the Cold War, without a 'revival of German militarism' that would frighten the French; Hansard HC vol 480 col 1417 (13 November, 1950); see also: 'Duncan Sandys Gives Grim Warning'; *Streatham News*: 8 December, 1950 in DSND 18/2.

This concept of British standing in the world may have had some relevance for his defence policy preferences. If Sandys was wary of British foreign policy becoming subordinate to United States interests, to the extent that he considered a European super-state accompanied by a significant military capability preferable, his defence policy preferences can be seen in another light. As will be shown later, whilst Minister of Supply he was notably insensitive to the Royal Navy's argument that their aircraft carriers bought Britain a worthwhile say in Atlantic naval policy. This argument eventually won over Churchill, after Sandys had almost convinced him to drastically reduce the role of the Navy, but it would return in opposition to Sandys when the Navy turned it against the Air Force and their apparent need for an increasingly expensive nuclear delivery system when they themselves admitted that the ultimate defence of Britain rested in American hands. Sandys' insistence on the maintenance of an independent element of British nuclear deterrence - preferably manufactured independently by Britain, but most definitely under unconditional British control - could perhaps also be understood through this aspect of his foreign policy preferences, seeing as some historians have credited the friction in Anglo-American relations following the Suez Crisis with forcing a renewed drive for independence in defence policies.[118]

Indeed, when Prime Minister Anthony Eden launched the post-Suez review of defence policy in December 1956, he made it clear that 'We should not wish to become entirely dependent on the United States for supplies of atomic weapons, warheads or fissile material', and said alternatives pursued 'either alone or in co-operation with other countries' ought to be considered.[119] If Sandys was genuinely taken by the idea that it was important for Britain to avoid further subordination to United States' policy, his insistence that Britain pursue those weapons which provided the greatest element of operational independence can be viewed in another light. That these weapons were British-built ballistic missiles, the construction of which Sandys would later pursue in the face of numerous obstacles and set-backs, would also serve to imbue an indigenous unmanned weapons programme with the kind of political value which he had noted in November 1944, and that the *Strategic Bombing Survey* had also recorded.

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[118] Baylis, J. 'British Defence Policy' in Baylis, Booth, K., *et. al.*, *Contemporary Strategy II: The Nuclear Powers* (London: Croom Helm, 1987), p. 154; Groom, *British Thinking About...*, p. 133.
[119] 'Long Term Defence Policy: Note by the Prime Minister, December, 1956'; PREM 11/1778 PR (56).

Having missed out on making his name by opposing appeasement, like many of those who at that point formed the emerging Conservative leadership, Sandys sought to make up for it after 1945 by taking a hard line against the Soviet Union, as well as attempting to associate the Labour Party with its excesses.[120] In a March 1948 speech he explicitly linked the Labour Party with the Soviet threat, saying 'you cannot rely upon a Socialist party, however well intentioned, to stand up firmly against the Communist menace'.[121] This was not an unusual charge, being repeated by Macmillan amongst others, but the draft speech Sandys prepared contained a lengthy passage, eventually undelivered, predicting Labour's imminent radicalisation along Soviet lines:

> As the crisis darkens, the cry will go up increasingly from Labour Party ranks for more and redder Socialism... Once the Labour Party comes under the leadership of men drawn from its extreme left wing, it will find it quite impossible to resist some alliance of fusion with the Communists. That will be the beginning in England of the process which on the Continent has sapped and destroyed one free country after another.[122]

This was crossed out of his copy of the speech, having presumably been reconsidered as unsuitable for a prospective parliamentary candidate, which he had become in 1947, when he was adopted by the Streatham Conservative Association. These concerns were nevertheless apparent in his early campaigning, and in his selection meeting he warned the committee that 'Our country is faced with an imminent threat of economic collapse'. His real view can be seen in his original draft which argued 'Our country is faced with two really big dangers - economic collapse and war', and he does seem to have spent much of this period being rather pessimistic about the latter.[123] In an October 1948 speech he made reference to his war work when discussing the Berlin situation and the chances of the Soviet Union acquiring atomic weapons, adding that, even if the blockade was lifted, 'the main problems will remain unsolved':

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[120] John Turner writes that the 'Munich legend', the idea of a small band of rebels consistently opposing appeasement, 'was soon to become the creation myth of Macmillanite Conservatism'; Turner, J., *Macmillan* (London: Longman, 1994), p. 123; see also: Crowson, N. J. 'Conservative Parliamentary Dissent Over Foreign Policy During the Premiership of Neville Chamberlain: Myth or Reality?' in *Parliamentary History*, Vol. 14, pt. 3 (1995), pp. 315-16.
[121] 'Speech to the AGM of the Streatham Conservative Association - 22 March, 1948'; DSND 16/2.
[122] *Ibid.*
[123] 'Speech to the Streatham Committee - 16 July, 1947'; DSND 16/2.

> In the last war I had a good deal to do with the defence against German V-weapons. We reckoned that if we had not succeeded in putting off the V-2 rocket bombardment until the French coast had been overrun by our troops, London would probably have been rendered unusable. If the rocket had contained an atomic bomb - and at one moment we feared that it might - London would, of course, have been annihilated. We who live in the fattest, most alluring of all bomb targets in the world have a very special interest in seeing that the Western democracies and Soviet Russia are settled and atomic energy brought under international control before Russia herself acquires this terrible engine of destruction.[124]

Although he made it clear that he desired a peaceful settlement, Sandys was willing to at least entertain the prospect that the Soviet Union might 'in her obstinacy' have started the Third World War. And if there was to be a conflict, he said, 'it would be better to have it now or in the near future', since trying to run away from the inevitable 'was the argument made at Munich in 1938'.[125] When these words were reported by the local newspaper, he was promptly accused of wishing to start this new war. He wrote to clarify that 'Only a madman - and certainly no-one who fought in the last war like myself' wanted a war, but argued that 'we shall not avoid war by pretending that the danger of it does not exist'.[126] He claimed that it was important for the West to stand firm on Berlin 'not because it is the only, or even the most important of our points of difference with Russia, but because it is the most immediate, the most clearly defined and, for that reason, perhaps the least difficult to tackle'. Success in Berlin, he argued, could make the Soviet Union take notice and 'become more co-operative in the settlement of other matters'.[127]

Sandys was returned to the House of Commons in the general election of February 1950, where the Conservatives regained many of the seats lost in 1945, but not enough to topple the Labour government. He maintained his campaign against the Soviet Union as elected representative, and in July 1950 he told the Streatham Chamber of Commerce that 'There is a state of danger no less than followed Munich in 1938'. Believing that

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[124] 'Speech at St. Leonards Parish Hall'; DSND 16/2.
[125] *Ibid.*
[126] 'Our Only Chance. We Must Have a Showdown Now, Before Russia Gets the Atom Bomb' - November, 1948; DSND 16/2.
[127] *Ibid.*

such an 'explosive state of affairs cannot continue indefinitely', he told his audience that 'we should be lacking in our duty as a nation if we did not put defence before the restoration of prosperity', adding 'what is at stake is our very lives and the freedom we fought for in the last war'.[128] By contrast, Churchill, perhaps looking towards an eventual return to government, had by this point started to tone down his anti-communist rhetoric.[129]

In December Sandys told a crowd in Streatham that he thought there was only a 'year or 18 months' left before the Soviet Union acquired enough nuclear weapons to pose a 'serious operational danger to the Western world'. By this point a clear pattern had developed in his public statements regarding the threat of communism, with similar warnings being included in many of his speeches. This particular address, however, stands out because of his answer to an audience question about the possible use of nuclear weapons in the Korean War (25 June 1950 - 27 July 1953). He said he did not think nuclear weapons would prove particularly useful in Korea, but added:

> It is a very grave responsibility to take if you are responsible for the lives of very large numbers of your fellow countrymen and the men of other nationalities who are fighting for a certain cause which you believe to be right. It is equally a very grave responsibility to allow those men to be killed and taken prisoner in the sort of conditions which you have in those countries - if you have something in the bag which would prevent it.[130]

This was a remarkable statement, as was his belief that there was no 'rule of thumb under what circumstances the atom bomb may be used'.[131] This speech was delivered in the wake of Harry S. Truman, the President of the United States, telling the press on 30 November that 'every weapon that we have' was being considered for use in Korea. Truman had made it clear that he did not want to see such a 'terrible weapon' used, but when questioned by journalists who could not quite believe what he had said, he described it as just 'one of our weapons' and appeared to suggest that Douglas

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[128] 'Duncan Sandys Gives Grim Warning'; *Streatham News*: 21 July, 1950 in DSND 13/16/1.
[129] Geoffrey Best writes that 'by the end of the 1940s words like "showdown" had disappeared from the vocabulary he (Churchill) had been using about the Soviet Union since 1944, to be replaced by words like "deterrent" and "co-existence"'; Best, G., *Churchill and War* (London: Hambledon and London, 2005), p. 222.
[130] *Streatham News*: 8 December, 1950 in DSND 18/2.
[131] *Ibid.*

MacArthur, the American general in charge of the United Nations' forces in Korea, would have the final decision on whether or not to use them.[132] When these words were greeted with a certain amount of surprise, the White House quickly issued a press release to clarify that 'only the President can authorize the use of the atom bomb' and that he had yet to do so, albeit whilst admitting that 'Consideration of the use of any weapon is always implicit in the very possession of that weapon'.[133] When news of this filtered through to the House of Commons, Prime Minister Clement Attlee promised to 'lose no time' in flying to Washington for crisis talks with Truman.[134] The Chiefs of Staff met to discuss the issue, where John Slessor, the Chief of the Air Staff, warned against allowing MacArthur to attack the Chinese mainland because it would probably have drawn the Soviet Union into the war.[135] John Lewis Gaddis has called it 'striking' that Truman never seriously considered using his most powerful weapon, even when the combined United Nations force was on the verge of defeat, given that United States strategy at the time depended on a 'high technology-low manpower' policy.[136] He writes that Truman inadvertently launched a 'trial balloon' which made clear the hostility of their allies to such a scenario, which, combined with his own aversion to the idea, ruled it out.[137]

The implication of Sandys' words is that, rather than nuclear weapons representing an absolute and final threat, he saw it as a practical policy alternative. The use of 'would prevent' leaves little to speculation in this sense. It may have been the case that Sandys, like a lot of people involved with the development and implementation of strategic bombing, might have been less inclined to view nuclear warfare as anything other than a logical development of existing practices. This would fit with his earlier belief that the issue should have been forced with the Soviet Union whilst the West - rather, the United States - remained in a dominant position through its monopoly on nuclear weapons,

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[132] 'The President's News Conference of 30 November, 1950' in Truman, H. S., *Public Papers of the Presidents of the United States: Harry S. Truman – Containing the Public Messages, Speeches, and Statements of the President, January 1 to December 31, 1950* (Washington: United States Government Printing Office, 1965), p. 727.
[133] *Ibid.*
[134] Hansard HC vol 481 col 1440 (30 November, 1950).
[135] DEFE 4/38, C.O.S. (50) 189th meeting: 30 November, 1950.
[136] Gaddis, J. L., *The Long Peace: Inquiries Into the History of the Cold War* (Oxford: University Press, 1987), p. 115.
[137] *Ibid.*, pp. 120-22; Nina Tannenwald writes that Truman had an 'abhorrence of atomic weapons, seemingly derived from his experience of having used them on Japan', and that he 'recoiled at the thought' of using them in Korea; Tannenwald, N., 'Stigmatizing the Bomb: Origins of the Nuclear Taboo' in *International Security*, Vol. 29, No. 4 (Spring, 2005), p. 18.

which was a point made elsewhere.[138] There does seem to have been a crude division on this issue between the military men and the politicians, with even Churchill expressing regret when Truman's successor, Dwight. D. Eisenhower, sought to entrench the normalisation of nuclear weaponry through what Nina Tannenwald has described as a 'deliberate and intensive policy to "conventionalize" atomic weapons.[139] If Sandys sincerely believed that the destructive power of nuclear weapons could be utilised in circumstances other than deterring, or responding to, a world-ending Soviet nuclear attack, then his policy preferences take on a new perspective. Unlike those who valued nuclear weapons solely for their deterrent effect, and who could not contemplate actually having to deploy them, Sandys concept of nuclear weapons use could have informed his policies that sought to maintain Britain's status as a nuclear power, namely the need for a greater level of operational independence, and the most effective means of securing that independence.[140]

The Historian

When not confronting communism, Sandys was helping Churchill to write his six-volume history of the Second World War. This process gives a valuable insight into how Sandys had come to interpret his actions during the Second World War, as well as what he perceived their consequences to have been. This, in turn, allows for a better

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[138] One of the clearest examples of this was a November, 1949, speech in the House of Lords by Hugh Trenchard. Trenchard, as Chief of the Air Staff from 1919-1930, had been the leading proponent of strategic bombing in Britain during the inter-war years. He asked 'What is the atom bomb but superior fire power?', and suggested that attacking the Soviet Union with them would save lives in the long run, even at the immediate cost of millions of Soviet casualties; Hansard, House of Lords Debates, HL vol 165 cols 427-28 (9 November, 1949); in America, an early report concluded that 'The atomic bomb has not altered our basic concept of the strategic air offensive but has given us an additional weapon'; 'The Implications of the Atom Bomb for the Size, Composition, Organization, and Role of the Future Air Force: 23 October, 1945' cited in Reardon, S. L. and Williamson, S. R., *The Origins of U.S. Nuclear Strategy, 1945–1953* (New York: St. Martin's, 1993), p. 29; Robert W. Malcolmson claims that until the Soviet Union developed the ability to launch an all-out attack directly against the United States, nuclear weapons were used on 'some twenty occasions' as coercive means of realising American diplomatic goals, which worked to 'stress the utility, not the non-utility, of nuclear weapons'; Malcolmson, R. W., *Nuclear Fallacies: How We Have Been Misguided Since Hiroshima* (Kingston and Montreal: McGill-Queen's University Press, 1985), p. 20.

[139] Eisenhower had been the Supreme Commander of the Allied Expeditionary Force in the Second World War but Churchill blamed Dulles, who he hated, for the policy; Jenkins, *Churchill*, p. 874; Tannenwald, 'Stigmatizing the Bomb...', pp. 23-24; Gaddis also credits Dulles with having 'persuaded an initially skeptical Eisenhower', but admits the policy 'appealed to Eisenhower on both military and economic grounds'; Gaddis, *The Long Peace*, pp. 123-24.

[140] On 25 July, 1955, Macmillan wrote in his diary: 'If we abolish the nuclear bomb (which has abolished war) shall we not bring back war? This is a danger, even if we succeeded in a water-tight system of control, inspection and all the rest, which is impossible... Why strive to get back to "respectable" war, with 1 million Russians, 600,000 British etc - well matched, but almost as disastrous and almost as certain as the 1914-18 and the 1939-45 wars?'; Catterall, P. (ed.), *The Macmillan Diaries: The Cabinet Years, 1950-1957* (London: Macmillan, 2003), p. 459.

understanding of the intellectual basis of Sandys' policy preferences, rooted as they were in a sometimes exaggerated version of events. The fifth volume of Churchill's memoir-cum-history contains a chapter titled *Hitler's 'Secret Weapon'*, first drafted by Sandys in December 1950.[141] The original draft, as David Reynolds writes, 'mirrored his own wartime contribution' by highlighting the threat of unmanned weaponry and emphasising the results of the attack on Peenemünde.[142] The latter claim became a contentious issue when Churchill passed the draft to both Cherwell and Jones. In the first draft, Sandys wrote that the Peenemünde raid 'may well have played a decisive part in the general progress of the war', citing a passage in Eisenhower's memoirs in support.[143] Both Cherwell and Jones objected to this portrayal, with Jones making his own amendments which, according to Sandys, did not merit inclusion as they merely covered old ground and offered nothing new.[144] The version eventually published was a compromise shorn of Eisenhower's words that described the raid as having played 'an important and definite part in the general progress of the war'.[145]

It is interesting to note that during his period as Minister of Supply, Sandys was still involved with Churchill and his literary project. This came to serve as an unofficial platform for Sandys' strategic ideas, in particular his opposition to the Royal Navy taking on a nuclear strike role with the N.A. 39 (Blackburn Buccaneer). Towards the end of 1952 Churchill was working on his sixth and final volume, and Sandys was once again called upon to help. This book contained the chapter *The Pilotless Bombardment*, and the old battles between Sandys, Jones, and Cherwell recommenced when, as Reynolds puts it, 'Duncan Sandys again tried to highlight his own contribution'.[146] In the original draft, Churchill had included a lengthy passage including lengthy quotes from Albert Speer, who had intimate knowledge of the unmanned weapons programme having been the German Minister of Armaments and War Production, which argued that the programmes were wasteful, and that the Germans would have been better off investing in conventional manned aircraft. This was particularly true of the V-2, Speer claimed, which was twenty times as expensive as the V-1. The Speer quote Churchill

[141] Churchill, W., *The Second World War: Volume V, Closing the Ring* (London: The Reprint Society, 1952), pp. 185-95.
[142] Reynolds, D., *In Command of History: Churchill Fighting and Writing the Second World War* (New York: Basic Books, 2007), p. 400.
[143] The Papers of Sir Winston Churchill (1874-1965); Churchill Archives Centre, Cambridge; CHUR 4/314/48.
[144] CHUR 4/314/294; Reynolds, *In Command of History*, pp. 400-1.
[145] Churchill, *The Second World War: Volume V*, p. 191.
[146] Churchill, W., *The Second World War: Volume VI, Triumph and Tragedy* (London: The Reprint Society, 1954), pp. 47-60; Reynolds, *In Command of History*, p. 456.

included mentioned that both bombers and fighters would have been a better use of German resources, but when Sandys was asked for his thoughts on the draft chapter he returned a completely re-written version with the passages based on Speer's words removed in their entirety.[147] Churchill wrote back on 13 January 1953 questioning Sandys' amended version and asking rhetorically whether or not Speer was correct.[148] Sandys replied on 29 January - at which point he was deep into a review of defence policy - with a compromise. Writing on official Ministry of Supply-headed paper, he argued that the Speer quote repeated and contradicted itself, and that it 'interrupts the sequence of the story'.[149] When Cherwell received a copy of this proposed compromise draft, he wrote to Churchill to say that Sandys' alterations 'would not give a true picture', adding 'Indeed I think it might be phrased in a much unkinder form were it not desired to let him down gently'.[150] The compromise section, as eventually published, reads:

> Despite the great technical achievements, Speer, the highly competent German Minister of Munitions, deplored the effort that had been put into making rockets. He asserted that each one took as long to produce as six or seven fighters, which would have been far more useful, and that twenty flying bombs could have been made for the cost of one rocket.[151]

The references to German bomber production had been erased. By placing the emphasis on fighters, the section no longer promoted the bomber aircraft as a more cost-efficient delivery system, as Speer had originally done, and as the Navy were then attempting to do. The flying bomb was given its due, but they were obsolete by this point, and not likely to be raised in policy discussions. The important thing for Sandys

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[147] CHUR 4/346/119-127; he also removed a passage detailing how Churchill brought the German weapons to Stalin's attention. On 13 July, 1944, Churchill asked Stalin to preserve the German test facilities, which the Soviet Union was rapidly approaching, as to allow British inspectors to view them. Stalin promised to do so, but, presumably in an attempt to buy his own inspectors time, claimed to be unsure as to which 'Debice' the facilities were based in. Churchill, in good faith, provided him with detailed coordinates, and in response Stalin offered 'to take personal care of the matter'. On 3 August, Churchill wrote again to Stalin reminding him of this, since 'The party of British experts have been at Tehran for several days waiting for their visas to enter the Soviet Union'. The British party returned home in mid-October with 'valuable information', but the Soviets had also taken advantage during the interim period; telegrams relating to the German test facilities in *Correspondence Between the Chairman of the Council of Ministers of the USSR and the Presidents of the USA and the Prime Ministers of Great Britain During the Great Patriotic War of 1941-1945: Volume I, Correspondence with Winston S. Churchill and Clement R. Attlee (July 1941-November 1945)* (Moscow: Progress Publishers, 1957), pp. 241-43, 245, 251, and 265; Churchill suggested including a note on 'how we were swindled in the end', but the section was dropped completely; CHUR 4/346/140.

[148] *Ibid.*

[149] CHUR 4/346/149-151.

[150] 20 February, 1953; CHUR 4/346/143.

[151] Churchill, *The Second World War: Volume VI*, p. 59.

was that manned bomber aircraft were not held up as a possible alternative to long-range rockets as a means of delivering explosive payloads, capable of matching the increases in performance that was thought to have made them impossible to defend against. Given that the medium V-bombers, on which the British nuclear deterrent was expected to rest, were all in advanced testing by this stage, there would have been no chance of the Ministry of Supply de-railing those programmes. However, although Sandys' Ministry had confirmed the specifications for the desired naval aircraft in August, it was not until February that companies began to respond with designs, and the programme had barely progressed by the time he was able to mount a thorough attack against it. Therefore, short of a rapid change of heart prompted by his responsibilities, it would be fair to say he was always against the idea of a naval strike aircraft capable of delivering nuclear weapons, and he would have had this in mind as he prepared his draft.

The next historian to call upon Sandys was Basil Collier, author of the official history of the German bombing offensive against Britain, *The Defence of the United Kingdom*, who sought out Sandys for information and advice. Having sent him a preliminary draft of his text, Sandys put together a detailed list of amendments. His feelings about the draft were made quite clear with the opening line of his 'General Comments', which read: 'There is an unmistakeable tendency throughout not only to belittle but to sneer at my own part in the story'.[152] He claimed that the text contained 'not a single friendly word' about his role, despite having had a 'larger personal responsibility than anyone else'. Consequently, Sandys felt, Jones and the Intelligence Staff had seen their roles 'magnified beyond all recognition'. It was, at least according to Sandys himself, the 'energetic and timely action' he had advocated on the back of that intelligence that had made the difference. This was the general tone of his criticism. Sandys accused Collier of implying that Jones would have been a better choice to chair the committees; described the claim that he provided 'speculative account[s]' as 'offensive'; and objected to Jones being given credit for predicting that the Germans had a long-range rocket in development. Collier was, he thought, attempting to 'minimise as much as possible the extent of my responsibility and the part I was called upon to play'. He also complained about the coverage given to the Peenemünde raid, which amounted to 'three short

[152] 'General Comments'; DSND 2/10D.

sentences', feeling that 'The dislocation caused by the killing of 735 personnel of the [Weapons Research] Establishment should be stressed'.[153]

J. R. M. Butler, the general editor of the official histories, sent Sandys a list of the changes Collier had made from his suggestions in February 1956, but Sandys was still far from happy with this revised version.[154] He wrote back to say 'this section of the book remains, so far as I am concerned, unfair and misleading'.[155] The copy of the amendments he received has hand-written notes in the margins that take issue with familiar themes. He felt the need to remind Butler and Collier of his important role in relation to the actual implementation of counter-measures, writing 'Intelligence officers do not take charge. They advise. They advised me', and asking rhetorically who had actually forced through the attack on Peenemünde. When an amended passage referred to 1943 as a period of uncertainty that had 'led to so much untimely speculation', Sandys scrawled in the margin 'and to the bombing of Peenemunde [*Sic*]!'[156] The published version, which would presumably have displeased Sandys, said of the raid on Peenemünde:

> From the standpoint of the present day, it is obvious that the attacks on Peenemünde and Watten were well timed and did good service to the Allied cause. We have seen, too, that soon afterwards any immediate prospect of rocket attacks on the United Kingdom was extinguished by the technical shortcomings of the weapon.[157]

Both Churchill and Collier had merely sought to classify the attack as one of many successful bombing raids carried out, but Sandys had clearly come to see it as something more. Rather than Sandys seeking political capital by retrospectively assigning himself a greater role in the defeat of Germany, it appears that Sandys had actually come to believe that his actions had 'played a decisive part' in the defeat of Germany. Conclusive proof of this can be found in 1964 when David Irving published his history of Operation Crossbow, *The Mare's Nest*, and Sandys, who had shared correspondence with Irving during the writing process, reviewed it for the *Evening*

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[153] A later paragraph, he said, 'again seems to be designed to impress us with the superiority of Dr. Jones'; *Ibid.*
[154] Butler to Sandys: 29 February, 1956; DSND 2/10D.
[155] Sandys to Butler: 29 February, 1956; DSND 2/10D.
[156] 'The Defence of the United Kingdom: 23 February, 1956'; DSND 2/10D.
[157] Collier, *The Defence of the United Kingdom*, p. 349.

Standard.[158] Despite returning to his previous irritations with the official histories, and criticising Irving for emphasising the role of intelligence-gathering at the expense of his practical counter-measures, he nevertheless praised it as an 'authoritative account of the V-weapon offensive'. In his description of the campaign, he returned to the position he took writing for Churchill by referring once more to 'the opinion of General Eisenhower'. Eisenhower, Sandys said, believed that the raid on Peenemünde 'may well have altered the course of the war'. He then went further: 'In fact, he has expressed the view that if the German V-weapons had come into operation six months earlier the Allied invasion of Europe from England would have had to be "written off"'.[159] This selective quoting distorts what had actually been written, as the full passage from Eisenhower's memoirs reads:

> It seemed likely that, if the German had succeeded in perfecting and using these new weapons six months earlier than he did, our invasion of Europe would have proved exceedingly difficult, perhaps impossible. I feel sure that if they had succeeded in using these weapons over a six-month period, and particularly if they had made the Portsmouth-Southampton area one of their principal targets, OVERLORD might have been written off.[160]

Irving had gone more towards Sandys' version in his book, writing that the raid delayed the unmanned weapons offensive 'just long enough to prevent it dislocating the combined Allied invasion of Normandy ten months later'.[161] However, where Eisenhower had speculated that the invasion 'might have been written off', Sandys had made the statement definitive. This thinking, when done in retrospect as in the case of Sandys, would appear to have been a classic case of 'Political Myth'. It is clear that Sandys had come to exaggerate the importance of his war service, but there is little to suggest that he did so to cynically further his own reputation and career. As has been said, the precise results of the raid on Peenemünde can still be debated. What is certain, however, is that Sandys' interpretation of Eisenhower's verdict - that the raid on Peenemünde, and therefore his contribution to the war effort, was decisive - did not correspond with any conceivable reality. By 1964, however, this mindset made little

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[158] Letters to Sandys can be found in DSND 15/17.
[159] *Evening Standard*: 1 December, 1964; DSND 2/10A.
[160] Eisenhower, D. D., *Crusade in Europe* (London: William Heinemann Limited, 1948), pp. 284-85.
[161] Irving, *The Mare's Nest*, pp. 21-22.

difference to government policy. The Conservatives had been defeated in the October general election, and Sandys would never again hold a Ministerial position.

Conclusion

Neufeld recounts the story of Dornberger describing the long-range rocket to Hitler as 'this perhaps decisive weapon' in a December 1939 memorandum. This baseless speculation, writes Neufeld, showed Dornberger to have been a 'true believer, and one willing to exaggerate for the sake of the cause'.[162] Sandys' position, whilst not entirely baseless, was comparable in this sense. By analysing Sandys' interpretation of his war experiences outside of the policy-making process, a clear picture begins to emerge of what constituted his individual belief system. He obviously saw the results of the attack on Peenemünde as far more important than they really were, which therefore suggests that he believed the threat it and its products posed was much more serious than it really was. He had accepted that the gigantic rockets of his early projections would not materialise well before the first V-2s began to land in Britain, but he had wasted little time in coming to believe that the V-2 descendants held unlimited potential, and therefore represented the future of warfare. In addition to this, his experiences being mainly ones of so-called 'unconventional' weapons had led him to refrain from accepting the emerging notion that nuclear weapons were different from the other, comparably less-destructive weapons that Britain and the West had long been able to call upon. This would prove to be equally as important as his faith in the supremacy of unmanned weaponry when he was given a chance to articulate his strategic vision in depth as part of the formal policy-making process.

[162] Neufeld, *The Rocket and the Reich*, pp. 124-25.

The Ministry of Supply and the Radical Review: 1953-54

The primary intention of this thesis is to explore the extent to which Sandys utilised the perceived lessons of his Second World War experiences in his activities as Minister of Defence. The ultimate intention is to ascertain the degree to which these experiences led him to become wedded to the ideas contained in his 1957 White Paper to the extent that he continued to champion them long after their impracticalities had been made apparent. In order to show the consistency in his approach, having described how Sandys came to interpret his experiences and memories of the Second World War, it is also worthwhile explaining how he had previously attempted to draw upon those lessons in a context that, whilst different in some respects, was still one characterised by the sort of non-routine and ambiguous situations in which the use of personal belief systems in the policy-making process could thrive. This section follows Sandys' work at the Ministry of Supply throughout 1953 and 1954, when he was called upon to make a significant contribution to the defence policy-making process for the first time.

When the Conservatives returned to office in October 1951, Churchill made Sandys Minister of Supply in order to force through the de-nationalisation of the steel industry, although the main responsibility of the Ministry of Supply was to oversee the provision of equipment for the Armed Forces.[163] This decision put Sandys at the heart of the defence policy-making process at an important time. The new Conservative administration had inherited a re-armament programme hastily put together by the previous Labour government in response to the Korean War, but there had been little serious consideration as to how Britain could continue to meet its wide-ranging commitments without placing an excessive strain on the economy. To this end the Chiefs of Staff submitted a report in June 1952, titled *Defence Policy and Global Strategy*, that intended to place economic concerns at the heart of strategic planning.[164] C. J. Bartlett has written that during the defence debates of late 1951 and early 1952, Sandys equalled the Chiefs of Staff in his 'radical thinking'.[165] However, when the 1952 review was deemed insubstantial, Churchill instigated what became known as the

[163] Jenkins writes that Churchill's wife, Clementine, tried to talk him out of giving Sandys such an important role, lest it be seen as nepotistic, and Clive Ponting claims that she actually convinced Churchill not to make him Secretary of State for War; Jenkins, *Churchill*, p. 829; Ponting, C., *Churchill* (London: Sinclair Stevenson, 1994), p. 755.
[164] 'Defence Policy and Global Strategy: Report by the Chiefs of Staff, 17 June, 1952'; The National Archives, Kew, London; CAB 131/12, D. (52) 26.
[165] Bartlett, C. J., *The Long Retreat: A Short History of British Defence Policy, 1945-1970* (London: Macmillan, 1972), p. 78.

'Radical Review', which sought to encourage an even more thorough examination of British defence policy. It was during this Radical Review of defence policy and expenditure, and its climate of uncertainty and potential upheaval, that Sandys was first able to arrange his policy preferences into a coherent strategic vision. This vision would not only be carried over into his time as Minister of Defence, as French has noted, but demonstrated clearly that the perceived lessons of the Second World War remained at the forefront of his thinking.[166]

Because the Ministry of Supply was not bound by an obligation to any particular branch of the Armed Forces, Sandys was almost uniquely able to offer comprehensive solutions to the dilemmas Britain faced without having to defer to service sensibilities or established ways of thinking. As a result, he could utilise his position to go well beyond what his more conservative colleagues and the Chiefs of Staff were willing to countenance, advocating long-term measures that were described within the Ministry of Defence as 'revolutionary' before being rejected.[167] With his lengthy memoranda of June and November 1953, Sandys challenged the strategic priorities the Chiefs of Staff had decided upon, calling their conception of the Cold War into question, whilst also arguing for a policy of dependence on unmanned weaponry and thermonuclear weapons at a time when little thought had been given to it by other Ministers or the Heads of the Armed Forces.

The Radical Review

Defence Policy and Global Strategy declared itself to be a 'basis for the revision of planned forces and defence production programmes', prompted by economic concerns and the perceived changes in warfare brought about by the ever-increasing power of the United States' atomic weapons stockpile. Baylis has written that the main legacy of the 1952 review was that, for the first time since the end of the Second World War, 'economic criteria had become central to the strategic planning process', in contrast to previous policy reviews where responsibilities were laid down and the British economy was forced to keep up.[168] However, as he notes, the final paragraph of the report, which

[166] French, *Army, Empire, and Cold War*, p. 159.
[167] Brownjohn to Alexander: 23 November, 1953; DEFE 7/2352.
[168] Baylis summarises earlier historical interpretations of the review as mistakenly believing, due to a lack of access to related sources, that 1952 broke new ground by building policy around deterrence; Baylis, *Ambiguity and Deterrence*, pp. 148-51.

was highlighted for emphasis in the original document, said that reductions in spending and a reconsideration of overseas commitments 'can be undertaken only by incurring real and serious risks'. Risks that, it was argued, were only worth taking 'in the face of the threat of economic disaster'.[169] In this respect, the Chiefs of Staff were clearly reluctant in seeking economies even at this early stage, and their report, whilst accepting the premise in theory, reflected their belief in the previous system of finding the money to carry out British responsibilities. Baylis also writes that the 'novel features' of the report should not be 'unduly exaggerated', which is a mistake he feels historians have made in the past by crediting it with putting nuclear deterrence at the forefront of British strategy, pointing out that reviews undertaken in 1947 and 1950 placed similar emphasis on nuclear deterrence, and therefore 1952 was weighted more towards continuity than change.[170]

The report spoke of the 'implacable and unlimited aims of Soviet Russia', amounting to nothing short of 'world-domination'. However, the Chiefs of Staff argued that such was the scale of American preponderance in both the stockpiling atomic weapons and in the means of delivering them, the Soviet Union could not hope to last more than a 'few weeks' in any full-scale war. The priority for Britain, therefore, was to maintain an effective nuclear deterrent and the will to use it in response to any Soviet aggression. It had also become clear to the Chiefs of Staff that 'in the foreseeable future' there would be 'no effective defence against atomic air attack', which carried 'the gravest implications for the United Kingdom'. This was because Britain was thought to possess 'the most threatening bomber bases from which atomic attacks on Russia could be launched', and these were expected to be primary targets for a Soviet Union still incapable of launching a decisive attack against the United States mainland.[171]

There was still thought to be a market for 'long-term defensive measures against air attack', but, given that there was nothing in sight to fully protect the nation, Britain could not afford to prioritise defensive measures above its only effective defence - the

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[169] The review was criticised in America for being 'dictated more by economic than by strategic considerations'; *Ibid.*, pp. 151-52; CAB 131/12, D. (52) 26.
[170] Baylis, *Ambiguity and Deterrence*, pp. 149-151; Clark and Wheeler also stress continuity; Clark and Wheeler, *The British Origins of...*, pp. 160-61; Baylis and Alan Macmillan have, however, suggested that the 1952 review influenced the 1957 Defence White Paper with its stress on nuclear weapons; Baylis, J. and Macmillan, A., *International Politics Research Papers, Number 13: A Reassessment of the British Global Strategy Paper of 1952* (Aberystwyth: Nuclear History Program, 1993), pp. 9-10.
[171] CAB 131/12, D. (52) 26.

main deterrent force.[172] The report had based its conclusions on the idea of an opening Soviet bombardment of 'unparalleled intensity', most likely followed by 'intermittent struggle' across the globe, during which 'vital sea lanes and ports must be kept open'. However, a 'prolonged period of Cold War' was the expected scenario, and the strategic priorities for Britain were deemed to be as follows:

(i) Action required to win the Cold War.
(ii) Playing our part in the deterrents against war.
(iii) Preparations for war.

In order to accomplish these tasks, the review stressed the necessity of protecting the 'North Atlantic lifeline', which meant a strong Navy; the need for an expanded strategic bomber programme 'at the expense of aircraft for tactical use' if need be; the continuation of nuclear weapons development; and the importance of maintaining troops in Europe, the Middle East, and the Far East - despite admitting that there were relatively easy savings to be made in reducing overseas commitments such as these.[173]

In September 1952 the Chiefs of Staff submitted another report confirming their belief that the proposed cost-saving measures demanded by the government were 'unacceptable on military grounds', and would have meant 'risks which we cannot believe to be justified in the present state of international relations'.[174] In October, having been asked to find further savings, they warned the government that their June review was in danger of being made redundant due to the changes in policy that would need to be made in order to meet their new targets. They said that either the government found the money to make their June recommendations work, or it took steps to 'reduce our commitments - and hence our status', which threatened to have a 'catastrophic' effect 'not only on our military but also on our economic position'.[175]

With little headway being made, the strategic situation was permanently altered on 1 November when the United States detonated the first thermonuclear device, promising

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[172] 'But if the United Kingdom, with its great experience, its technical skill, and its highly developed communications system, is unable to devise an effective defence for such a small area, the task is all the more difficult for the Soviet Union'; CAB 131/12, D. (52) 26.
[173] *Ibid.*
[174] 'The Defence Programme: Report by the Chiefs of Staff, 29 September, 1952'; CAB 131/12, D. (52) 41.
[175] 'Defence Programme: Report by the Chiefs of Staff, 31 October, 1952'; CAB 131/12 D. (52) 45.

hitherto undreamt of destructive capabilities. Having compromised on spending for 1953, Churchill asked Norman Brook, the Cabinet Secretary, to establish a Ministerial Committee on Defence Policy to report on future defence policy.[176] Brook met with civil servants from the Treasury, the Foreign Office, and the Ministry of Defence to discuss how to proceed, where it was pointed out that asking the Chiefs of Staff for guidance would be 'pointless', since their recommendations were based on existing commitments.[177] The Committee was to formulate the Radical Review, and in January 1953 Brook brought his group of civil servants together, along with the Chiefs of Staff, to build on some of the recommendations put forward in 1952. Brook made it clear that previous defence reviews were seen by the politicians as mere 'deferments of certain measures', which was no longer a suitable approach when the likelihood of a 'hot war' was believed to have been reduced, so planning for a 'long period of cold war' was to be given priority.[178]

It is with this in mind that Clark and Wheeler have characterised the Radical Review as an exercise intended to 'deny legitimacy to Army, and especially Navy, preparations for a long nuclear war'.[179] However, whilst the Radical Review had sought to bring focus to some of the more vague commitments contained in the 1952 review, the decision to plan for a short war was not taken until the politicians had taken hold of the process after unsatisfactory progress in the first half of 1953.[180] That progress would be unsatisfactory had been apparent from the beginning, when half an hour before the first meeting with Brook, the Chiefs of Staff Committee had met to plan their approach to negotiations. They agreed to establish the principle that defence spending could only be reduced through 'major changes of policy', since 'all possible pruning' had been done.[181] William Dickson, the Chief of the Air Staff, was happy to prioritise 'survival during the first intensive phase', but Rhoderick McGrigor, the First Sea Lord, disagreed. He felt that such priorities did not apply to the Navy as they did to air and ground forces, because the Navy was required to 'keep our lifeline to the North American Continent' open in order to survive the second phase, which would be 'protracted', and to build reserves for 'the final victory'.[182] McGrigor won the argument, and was able to then

[176] Ovendale, R. (ed.), *British Defence Policy Since 1945* (Manchester: University Press, 1994), p. 97.
[177] 'Record of a Meeting held in Sir Norman Brook's Office: 12 November, 1952'; DEFE 7/2349.
[178] CAB 134/810, D.P.(O) 1st Meeting: 16 January, 1953.
[179] Clark and Wheeler, *The British Origins of...*, p. 183.
[180] Baylis, *Ambiguity and Deterrence*, p. 175.
[181] DEFE 4/59, C.O.S. (53) 6th Meeting: 16 January, 1953.
[182] *Ibid.*

inform the Brook Committee that the 1952 review had considered 'economic and political factors', as well as the possibility that, despite the reduced risk of 'deliberate hot war', the nation still had to be prepared of a drift into war 'by some indiscreet action on either side'. With this in mind, he reported that the Chiefs of Staff could not accept any further reductions in defence expenditure without 'some drastic change in policy'.[183]

The staunchly conservative framework for the Committee was set, and when Brook submitted his report on 20 May, there was little to differentiate it from what had been laid down in 1952. It met the requirements of the Radical Review in that it accepted that the priorities decided by the Chiefs of Staff in 1952 were quite vague, and did not properly consider the need to 'maintain our influence as a world Power'. Unfortunately for the government, Brook used this as a cue to lean more towards open-ended interpretations, such as the need to 'maintain forces overseas even if all our cold-war commitments came to an end'.[184] The report saw 'no prospect' of meeting the reductions demanded by the Treasury, stating that such reductions would require a new strategic policy 'devised to meet the financial circumstances', the implications of which were clear from the apocalyptic visions of future naval and aerial strength predicted by the report.[185]

The Sandys Doctrine

With the Brook Committee proving something of a let-down to the government, and with the Chiefs of Staff either unable or unwilling to find the savings asked of them, the politicians took charge of the Radical Review and scheduled an 18 June meeting with only the Service Ministers representing the Armed Forces.[186] Before the meeting, Sandys had circulated an eleven page memorandum in which he explained his strategic vision at length across ninety-seven separate points. His preferred approach was to 'concentrate expenditure on those objects which will give the highest return in terms of

[183] CAB 134/810, D.P.(O) 1st Meeting: 16 January, 1953.
[184] 'The Future Course of Defence Expenditure, 20 May, 1953'; CAB 134/809, D.P.(M) (53) 2.
[185] Naval reductions 'can only be temporary and are wasteful and dangerous', and, along with the depletion of seemingly every resource required to put a modern navy to sea, would have left Britain with a 'quite inadequate' force by the middle of the 1960s. The Air Force would also suffer 'certain reductions in quality'; CAB 134/809, D.P.(M) (53) 2.
[186] The Chiefs of Staff had submitted another report on 10 June, 1953, that re-affirmed their commitment to viewing the security of sea communications as 'essential to the implementation of our strategy'; 'Outline of United Kingdom Intentions in War: July to December 1953, 10 June, 1953; DEFE 5/46, C.O.S. (53) 270.

effective defence', and of 'concentrating our strength at the vital points'.[187] This was in sharp contrast to the Chiefs of Staff, who merely sought to stretch ever-dwindling resources further and further. That approach, Sandys said, could only lead to a 'general lowering of the standards of efficiency and preparedness'; so he radically advocated the subordination of policy to the economic realities of medium power status.

The opening paragraphs of his memorandum proposed some measure of colonial retreat, where only the 'minimum forces necessary' should be designated for colonial responsibilities, but with a strategic reserve based in Britain to be deployed rapidly 'In the event of troubles, such as we are now having in Malaya and Kenya'.[188] The protection of Hong Kong by 'offensive operations against the aggressor country', rather than local operations was one mooted example a of cost-saving measure, even though such a policy would presumably have risked an even more costly general war with China, as he would later admit that operations mounted in defence of Hong Kong 'need not necessarily be conducted in Hong Kong'.[189]

It was then that he turned his attention to the strategic priorities of the Chiefs of Staff. He disagreed with the idea of prioritising deterrence over having to win a 'hot war', writing that they 'form part of a single task and to attempt to separate them is confusing'.

> [T]he task of winning the cold war consists primarily in building up deterrents against a hot war. Similarly, the only deterrents which are likely to be effective are actual preparations for war, such as will convince a potential aggressor that he will surely be defeated. Therefore, apart from the requirements of Commonwealth commitments, our defence effort must be directed towards one single objective, namely, to prepare for the possibility of a major war with Russia. This will not only put us in the best position to defend ourselves if war should come, but will provide the best hope of preventing it.[190]

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[187] 'Review of Defence Expenditure: Memorandum by the Minister of Supply,15 June, 1953'; DNSD 4/1/1.
[188] French has said that this idea would prove influential over the coming years, eventually being implemented by Sandys as Minister of Defence; see: French, D. 'Duncan Sandys and the Projection of British Power after Suez' in *Diplomacy and Statecraft*, Vol. 24, No. 1 (2013), pp. 41-58.
[189] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1; CAB 134/809, D.P.(M) (53) 1st Meeting: 18 June, 1953.
[190] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1.

This is evidence of Sandys again normalising nuclear weapons by viewing them as part of general strategic considerations, rather than as an additional factor. The thinking of the Chiefs of Staff was that a 'hot war' breaking out with the Soviet Union would have represented a failure of deterrence, which would then have led in to a distinctive new war. For Sandys, who did not neatly separate nuclear and non-nuclear warfare in this manner, it would have simply meant that the British supply of nuclear weapons had not proven to be as useful as might have been expected. Thus the same war continued, only with more potent weapons. His experiences of trying to counter the V-2 threat during the Second World War, and his subsequent exaggeration of the importance of doing so, could be said to have had an influence on this position. The unconventional weapons Germany produced, whilst thought of as potentially devastating, were ultimately seen as just another target to be [successfully] neutralised by Britain's own long-range revenge weapon, the heavy bombers of Bomber Command. Additionally, because no direct means of defence against the V-2 had been found, this sort of indirect defence had been deemed the most suitable counter-measure. If the Soviet Union was going to decide any future global war with its nuclear arsenal, as Sandys' seemingly believed Hitler had intended to do with his unmanned weapons programme, then deterrence and defence became one and the same. The former meant devising a policy of threatening to destroy the Soviet Union, the latter would have simply meant implementing it.

This belief fitted with the assumption that any war would begin as a nuclear war, so Sandys concluded that 'For us in this small island the opening phase will be decisive'. If the Soviet Union could bring enough power to bear that British industry was crippled and American bomber bases rendered worthless, 'Britain would be for all practical purposes be knocked out of the war'. Therefore the 'decisive opening phase' should be given priority, and 'we must unhesitatingly accord lower priority' to anything deemed not to be of importance in surviving the opening few weeks of global nuclear war. To this end, he emphasised the need to focus on the 'Introduction of New Weapons', and the influence of his war experiences were clear to see. This section of his memorandum contains the following points:

> The Russians have the advantage over us in military man-power. Our chief strength lies in the superior quality of our equipment. If we were to lose the technical lead and initiative which we now possess over the Russians, our

> situation would indeed be precarious. Moreover, the knowledge that we and the Americans are continuously evolving new and more powerful weapons, which are liable to upset Soviet military calculations, is bound to make the Kremlin hesitate to risk war, and therefore contributes a most important factor for peace.[191]

Along with the call for 'no reduction of effort on basic research... upon which all further advances in the science of war depend', this was one of the main points of his November 1944 report to the War Cabinet. That report had predicted that 'possession of superiority in long distance rocket artillery may well count for nearly as much as superiority in naval or air power', and warned that Britain would fall behind if rocket programmes were not adequately funded.[192] On top of this, Sandys said that the 'main instrument for strategic counter-attack' would, in due course, be thermonuclear weapons, and that any country 'which does not possess a substantial stock of these, together with the means of delivering them, cannot be regarded militarily as a first-class power'.[193] Because Sandys saw the delivery of nuclear weapons as a matter of active defence policy, he took the need to possess an effective delivery system seriously:

> The adoption of guided rockets for anti-aircraft defence must ultimately be followed by the development of long-range guided rockets for use in offensive bombing roles. Preliminary investigations indicate that it should be technically possible, within the next 10 years or so, to produce guided rockets, which could travel at altitudes of over 70,000 ft. and at speeds several times that of sound, and which would be capable of accurately delivering bombs at ranges up to 2,000 miles. There is no doubt that the devastating possibilities of the long-range guided rocket, carrying an atomic or hydrogen warhead, are such that we cannot afford to allow the Russians to produce weapons of this kind ahead of us. Nor must we neglect the study of possible methods of defence.[194]

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[191] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1.
[192] '"CROSSBOW" Committee: Seventeenth Report by the Chairman, 23 November, 1944'; DSND 2/3/6.
[193] Sandys' archive contains drawings by William Penney, the Director of the Atomic Weapons Research Establishment, that illustrated how a thermonuclear bomb would have worked. The precise date of the drawings is not listed, but they were done in 1952 and have '5MT' (5 Megatons) written on them. This would have meant a weapon some 200 times as powerful as the first British atomic weapon, exploded on 3 October 1952; DSND 15/4.
[194] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1.

It would not be unfair to say that at this point in time Sandys was somewhat ahead of the curve in his thinking. The 1952 review had said that the counter-bombing of Soviet facilities represented 'the most effective single measure' to reduce the atomic threat, mainly because Slessor believed whole-heartedly in strategic bombing as Britain's primary means of defending itself.[195] When the Brook Committee was putting its report together, it used as its guidance for air defence a Chiefs of Staffs report that estimated Britain would receive a 'substantial proportion' of the Soviet atomic stockpile of anywhere between 100 and 200 weapons, and that a 'high percentage' would reach their targets even if current air defence estimates were maintained.[196] Incredibly, despite owing its existence largely to the American thermonuclear weapons test, the Brooke Committee appears to have given no special consideration to the effects that massively increased destructive power promised to have on British strategic priorities.

Even the Guided Weapons Advisory Board, which reported to the Minister of Supply, and had studied Sandys' fight against the original V-2 when putting together its recommendations, was unable or unwilling to think too far ahead. When the board met during the first weeks of the Radical Review process, it was suggested that 'active defence might not be possible', but that passive defence might be 'profitable' if any long-range rocket attack involved only a 'small number, with atomic warheads'.[197] Sandys, referring to 'the next 10 years or so', had clearly taken the long-term aims of the Radical Review to heart. In contrast the panel of esteemed scientists and engineers, representing both the state and industry, limited their horizons to the short-term, seeing as they did not factor into their thinking the possibility that the Soviet Union would invest heavily in long-range rockets, despite admitting that they would prove difficult to defend

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[195] CAB 131/12, D. (52) 26; having been heavily involved with the strategic bombing offensive during the Second World War, Slessor told his audience in a 1948 lecture that 'German capacity to continue the war was smashed from the air in the spring of 1945', and that had the Allies 'marked time outside Germany's frontiers the Germans would still have had to surrender just about when they did'. He then drew a favourable comparison to 'today in the atomic age, and tomorrow in an age when the pilotless aircraft of the guided missile takes the place of the manned bomber' to illustrate how the idea survived; *Some British Strategic Problems: Lecture at the United States National War College, Washington, April 1948* in Slessor, J., *The Great Deterrent: A Collection of Lectures, Articles, and Broadcasts on the Development of Strategic Policy in the Nuclear Age* (London: Cassell & Company Ltd, 1957), p. 74.

[196] 'Scale and Nature of Air Attack on the United Kingdom: 19 January, 1953'; CAB 134/813, D.T.C. (53) C.

[197] Guided Weapons Advisory Board: 8th Meeting, 28 January, 1953; WO 195/12197; working on the assumption that Soviet rockets would be 'similar' in performance to the V-2, but equipped with an atomic warhead, the board concluded that there was 'no one technical factor' that made defence impossible. Their leading solutions, however, were impractical, amounting to a radar system that offered a four minute warning and predicted the point of fall, although this latter aspect 'might not be possible' if more than one rocket was launched, and an interceptor rocket carrying a 300lb fragmenting warhead; 'Anti-V.2 Defence: Report by the Guided Weapons Advisory Board'; this file is undated, but the National Archives catalogue lists it as 1952; WO 195/12081.

against, or that they would come equipped with thermonuclear warheads. There is no clear evidence of Sandys being moved to voice any disagreements he might have had with the Guided Weapons Advisory Board, but its reluctance to see beyond what will have seemed like such conservative projections to Sandys must have worked to reinforce his willingness to override supposed expert opinion where it came into conflict with his own policy preferences.

Reaction

Sandys' vision for Britain differed wildly from what other departments had put forward. Anthony Head, the Secretary of State for War, who managed to limit his briefing to eleven points over three pages, had also disagreed with the Chiefs of Staff's priorities; but his interpretation was more conservative. Head suggested that the main deterrent against Soviet aggression was American strength, to which Britain's contribution could never prove 'decisive'. His priorities for Britain were that 'we win, or at least do not lose, the cold war', and that 'hot war' preparations should actually be considered before nuclear capabilities 'which duplicate strength created or about to be created in America'.[198]

Head also made a lot of synchronising policy with the United States, writing that the Navy should complement their 'very great preponderance of naval strength', rather than attempting to compete with it. The same cooperation with American air power was equally necessary to allow Britain to scale back its bomber force which was already too large, since 'Modern aircraft are capable of repeated sorties and presumably we shall not drop all our atomic weapons in the first few days of a war'. Research and development could also be streamlined through greater Anglo-American cooperation, as could the functions of the Ministry of Supply, which Head felt were too broad for one Minister to 'supervise closely' whilst also dealing with the steel industry.[199] By comparison, Sandys' vision of Anglo-American cooperation was based on the need to 'maintain our special position as America's major partner', which meant making an impression on them with independent strength in order to 'prevent ourselves being rated on a level with France'. To this end Britain had to 'play some appreciable part' in any attack on the Soviet

[198] 'Ministerial Committee on Defence Policy: Memorandum by the Secretary of State for War, 15 June, 1953'; CAB 134/809, D.P.(M) (53) 4.
[199] *Ibid.*

Union.[200] As touched upon in the previous section, this meant maintaining an element of nuclear strike capability, as this was the only thing Sandys believed could have ever 'play[ed] some appreciable part' in joint operations with the United States in any global war.

Where Sandys and Head found some common ground was on the role of the Navy, which had been taken to task in Sandys' memorandum. The role of the Navy under his proposed policies of thermonuclear stockpiling would have mainly been one of anti-submarine and mine-sweeping operations. This, coupled with an expectation that the United States would protect convoys in the Western Atlantic, where the dangers of mining and submarines would likely be reduced, and because they would most likely be American ships transporting materials to any theatre of war that survived the opening phase, meant that an 'appreciable reduction in expenditure on aircraft-carriers and the costly aircraft which operate from them' was possible. Another suggestion was that the Admiralty take over the duties of coastal protection as to 'encourage a reduction in costly carrier-borne aviation and greater use of shore-based aircraft'.[201]

The Admiralty rushed out a response on 17 June, the day before the meeting, to remind those set to attend what the Navy was for. It claimed that the United States could not be relied upon straight away in the North Sea, so it would be up to the Navy to close the Baltic and protect Norwegian sea lanes from the 'very powerful' Soviet Naval Air Aim. Soviet cruisers, sent to harass British trade, would also need to be countered with aircraft carriers as well as British cruisers. The Navy was also important in 'uniting us with the distant members of the Commonwealth'. Finally, they played the political card, hinting towards an issue that would continually plague Sandys' proposals. They speculated whether a 'Government prepared to implement a Continental strategy at the price of being a world power could continue to enjoy the support of the nation'.[202] This was matched by an internal Ministry of Defence response to an earlier draft of Sandys' memorandum that described his central argument, 'that the task of winning the cold war consists primarily of building up deterrents', as 'questionable', citing recent experience in Korea as an argument against it. It also said Sandys was 'going too far' on the future

[200] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1.
[201] *Ibid.*
[202] 'Ministerial Committee on Defence Policy: Memorandum by the First Lord of the Admiralty, 17 June, 1953'; CAB 134/809, D.P.(M) (53) 7.

of the Navy, and that his Air Force policies would actually increase expenditure 'considerably'.[203]

In spite of this immediate hostility to Sandys' ideas, Churchill was receptive. He explained that he still hoped to find some form of détente with the Soviet Union, and that until he could do so it would be 'fatal' if anybody noticed that Britain was cutting its defence expenditure; but he nevertheless found himself in full agreement with Sandys' main idea of 'lay[ing] down operational priorities which would make possible a reshaping of the Armed Forces'. These priorities were, as explained in his memorandum, whatever contributed to surviving 'the first six weeks of the next war'.[204] Sandys arguments for planning for the decisive opening phase were accepted by Churchill, and the Minister of Defence, Harold Alexander, was sent to inform the Chiefs of Staff that they would have to 'urgently' trim another £308 million from their proposed programme for 1955-56, which would have meant freezing expenditure at its then level.[205] Clark and Wheeler have called this 'June Directive' the first occasion in the age of nuclear weapons where 'Ministers had initiated changes in strategic doctrine without prior consultation with their military advisors', and Sandys was the driving force behind it.[206]

The Chiefs of Staff reacted negatively to these new priorities. McGrigor slammed what he saw as moving towards a 'defensive "Maginot" attitude' that might 'militate strongly against the survival of the United Kingdom', adding two days later that reducing naval functions was 'patently unsound', and could only have been decided upon by the politicians if they believed that the likelihood of war was receding. Therefore, if these cost targets were to be met, McGrigor said that 'reductions should be recommended that were capable of immediate replacement in war', which meant preserving heavy equipment like ships over armies that could be scratched together relatively quickly.[207] John Harding, the Chief of the Imperial General Staff, agreed with

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[203] Internal memorandum: 10 June, 1953; DEFE 7/2350.
[204] CAB 134/809, D.P.(M) (53) 1st Meeting: 18 June, 1953.
[205] *Ibid.*
[206] Clark and Wheeler, *The British Origins of...*, p. 184.
[207] DEFE 4/63, C.O.S. (53) 78th Meeting: 24 June, 1953; DEFE 4/63, C.O.S. (53) 80th Meeting: 26 June, 1953; John Fisher, who had served as First Sea Lord from 1904-1910, and again from 1914-15, had written half a century before 'The finality of a modern sea fight - once beaten, the war is finished. But beaten on land, you can improvise fresh armies in a few weeks! You can't improvise a fresh navy; it takes four years!'; letter to Lord Esher, 23 April, 1904 cited in Marder, A. J. (ed.), *Fear God and Dread Nought: The Correspondence of Admiral of the Fleet Lord Fisher of Kilverstone: Volume I - The Making of an Admiral, 1854-1904* (London: Jonathan Cape, 1952), p. 311.

the First Sea Lord about the 'unrealism and unsoundness' of the proposal, but urged him to go along with the terms of reference put forward by the government. Arguments against the results of their economies would, he prophetically suggested, be better reserved for a later date. Dickson agreed with this approach, speculating that the proposed reductions might not provide any savings anyway.[208]

The adoption of Sandys' priorities represented a major threat to the Navy, and the Admiralty became so irritated by Sandys that they sent the Director of Naval Intelligence and the Vice Chief of the Naval Staff to give him a three hour briefing on what they thought he did not understand about naval warfare.[209] However, Sandys' ideas merely reflected the debates that surrounded 'broken-backed' warfare, which Eric Grove has called a 'weak concept' that the other services would have been happy to abandon, and which had previously taken place across the Atlantic.[210] There the United States Navy had reacted to the establishment of an independent air force in 1947, which monopolised American atomic weapons strength along similar lines to what Sandys proposed for the Royal Air Force, by commissioning five massive flush-deck aircraft carriers from which to launch atomic bombing raids. After a bitter, sometimes public, battle between the services the programme was cancelled just days after construction began on the lead ship, when the government decided that the proposed carriers would prove to be an expensive duplication of Strategic Air Command functions.[211]

With the Armed Forces set against him, Sandys' found an unexpected ally in the Paymaster-General: his old rival Cherwell. In a meeting where Alexander made clear that further reductions could only be achieved by 'cutting out substantial sections of valuable defence organisation', a view supported by the First Lord of the Admiralty and the Secretary of State for Air, Cherwell demurred. He raised the idea of taking 'very big risks by gambling on the success of new inventions and new techniques'. He had

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[208] DEFE 4/63, C.O.S. (53) 80th Meeting.
[209] Grove, E., *Vanguard to Trident: British Naval Policy Since World War II* (London: Bodley Head, 1987), pp. 92-93.
[210] *Ibid*,, p. 96; Baylis has described it as the result of a compromise, citing Slessor as saying 'we had to put it in for the sake of little Rhoddy McGrigor because otherwise if there was no broken-backed war then there was no case for keeping a large Navy!'; Baylis, *Ambiguity and Deterrence*, p. 144; Moore, however, has attempted to look beyond 'concentrating on the commanding heights of the inter-service debates', and believes that, not only was 'broken-backed' warfare a policy with 'considerably intellectual and bureaucratic foundation', but that it was influenced largely by the 'vivid memory of the Battle of the Atlantic'; Moore, R., *The Royal Navy and Nuclear Weapons* (London: Frank Cass, 2001), pp. 65-66.
[211] Hammond, P. Y. 'Super Carriers and B-36 Bombers: Appropriations, Strategy and Politics' in Stein, H. (ed.), *American Civil-Military Decisions: A Book of Case Studies* (Birmingham: University of Alabama Press, 1963), pp. 467-95.

unmanned weapons in mind, as well as designating anti-submarine operations as an Air Force responsibility. Such ideas, he thought, would have allowed Britain to remove 'whole groups of armaments' from its strategic calculations, naturally saving a lot of money.[212] Sandys returned to the need for a 'detailed examination' of British strategic priorities, the main one of which was still 'to prevent our total annihilation in the early stages of a future war'. This led him to ask two questions: How much warning could Britain expect before the opening aerial bombardment; and what part did the United States intend to play in the opening phase across the world? Both of these questions put the spotlight on the Navy, since a surprise attack was believed to have stood a good chance of destroying their ships either in port (which would presumably have seen the surrounding city destroyed with them) or on the open waters, and because a firm commitment from the United States to engage in world-wide sea warfare would have reduced its importance to British survival.[213]

Alexander and Sandys were invited to produce a list of questions for the Radical Review to answer, mostly regarding how the Navy could justify its current budget, with an additional question relating to the possible effects that guided weapons might have on existing naval and air forces.[214] After another meeting, Alexander sent everybody away before the summer recess to consider what they could put into the field under re-calculated budget ceilings, and Sandys wrote directly to R. A. Butler, the Chancellor of the Exchequer, suggesting that expenditure could, in fact, be reduced even further than everybody seemed to imagine. Although it would prove 'extremely painful' and 'humiliating to our national pride', Sandys thought it was feasible to reduce spending by an extra 50-100 million on the proposed June budget. He offered a 'very tentative' plan for allocating resources that suggested the Navy receive a 21% share of defence expenditure compared to the Army and Air Force taking 35% each. This, he predicted, would see the Admiralty 'no doubt say that this involves the mutilation of the Navy and that it is wholly unacceptable', but he nevertheless felt that 21% was 'quite as much and probably more than can be justified' if naval warfare was to be seriously downgraded in accordance with the policies put forward in his June memorandum.[215]

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[212] CAB 134/809, D.P.(M) (53) 2nd Meeting: 17 July, 1953.
[213] *Ibid.*
[214] 'Further Examinations: Note by the Minister of Defence, 23 July, 1953'; CAB 134/809, D.P.(M) (53) 10.
[215] Sandys to Butler: 23 July, 1953; DSND 15/4.

During the summer, the Soviet Union exploded what they claimed to be a thermonuclear bomb. It was still a relatively small device, and nowhere near as powerful as the successful American test of November 1952; but the fact the Soviet Union claimed to have mastered the process would have consequences for strategic policy-making, particularly since this Soviet weapon was compact enough to potentially be delivered by aerial bombardment, unlike the vast installation the United States had used to verify its technology.[216] Nevertheless, when the Radical Review was revived after the summer recess, the policy debates surrounding it stuck to the same lines.

The Second Phase

When the Radical Review resumed in October, the Defence Research Policy Committee stirred the conflict between Sandys and the Navy with a report analysing the likely effects of restricting the research and development budgets for the Ministry of Supply and the Admiralty. It was predicted that unless savings could be found elsewhere, the Navy would struggle to introduce 'any new item'. In addition to this, it would negatively impact existing programmes on anti-submarine warfare, anti-mining operations, and torpedo countermeasures. In other words, everything the Navy was expected to do in the sort of role Sandys had in mind for it. For the Ministry of Supply, which was facing a 14% reduction in its research and development funding, reductions were going 'to hurt and to hurt very badly'. The report listed a number of programmes which would have to be cancelled in order to meet the planned reductions, including the N.A. 39, as well as a number of bomber projects.[217] McGrigor, who said that the Admiralty, unlike the Ministry of Supply, 'had to take a realistic' view of research and development, thought that ending the N.A. 39 programme would prove 'highly dangerous' for the Navy. Denied of an 'efficient Strike aircraft', it would be no match for the Soviet Union at sea.[218] Dickson was similarly concerned about the effect of research and development cutbacks on his bombers, suggesting that 'less serious' reductions might be found in 'front line forces'. McGrigor had urged his colleagues to unite against

[216] The American device, with a blast yield of 10.4 megatons, had been an eighty-two ton platform built in order to validate the scientific concepts behind thermonuclear weaponry. The Soviet weapon was much smaller, but only produced a blast yield of 400 kilotons. In addition to this, it was a single-stage weapon, not capable of being reproduced in larger form like all 'true' thermonuclear weapons. The Soviet Union did not test their first 'true' thermonuclear weapon until November 1955, and even this was well behind contemporary American weapons in terms of its explosive power.
[217] 'Radical Review - Research and Development Programmes: Report by the D. R. P. Committee, 15 October, 1953; DEFE 10/32, D. R. P./P. (53) 45.
[218] DEFE 4/65, C.O.S. (53) 119th Meeting: 20 October, 1953.

cutbacks in June, and now the Air Force and the Navy had started to find some common ground against the Army; but their projects were still under threat.[219]

Before Sandys was given the chance to defend Ministry of Supply allocations, McGrigor called the Chiefs of Staff together to discuss exactly where things were heading. They knew that the Radical Review was not progressing in accordance with their strategic priorities, but they had accepted the need to go through with it as a 'mechanical exercise'. Now that the government had 'seriously departed' from their 1952 recommendations, as well as those of the Brook Committee, the Chiefs of Staff had to consider whether policy was being determined 'in accordance with their views'. Were it not, their reservations would have to be formally registered, and it was felt that it might also have been necessary 'to arrive at a clear understanding of the constitutional position of the Chiefs of Staff in this matter', which meant reminding the politicians that the Chiefs of Staff were there to advise on all military matters and that their advice was not to be dismissed lightly. John Baker, the Vice Chief of the Air Staff, agreed to some extent, but said they could not establish their own firm position until the politicians had assembled a more coherent policy. Harold Redman, the Vice Chief of the Imperial General Staff, was firmly with McGrigor. He said the War Office had only ever seen the Radical Review as a mechanical exercise, and that the Chiefs of Staff should 'emphasise their reservations', albeit when the time was right. Neville Brownjohn of the Ministry of Defence added his support, and an agreement was reached to make it clear that, despite their association with the Brook Committee report on which the Radical Review was originally based, they would not collectively endorse it. It was also agreed that they would re-affirm their commitment to the 1952 report, and make it known that they felt 'most uneasy' about the latest developments - particularly Sandys' main contribution, 'the special consideration now being given to hot war preparedness under the specific heading of survival'.[220]

Sandys was given the chance to defend his policy preferences when the politicians met with the Armed Forces in November. When James Thomas, the First Lord of the Admiralty, informed the meeting that the Navy could not accept the 'very serious Naval consequences' that a budget ceiling of £1650 million would mean, Sandys tore into the

[219] DEFE 4/63, C.O.S. (53) 76th Meeting: 22 June 1953.
[220] DEFE 4/66, C.O.S. (53) 121st Meeting: 27 October, 1953.

Navy.[221] After claiming that failure to enforce a budget ceiling would have led to costly cancellations in the future, he said he could not accept the Ministry of Supply being denied financing according to 'any rational system of strategic priorities'. If any extra money were to be made available, he said, it should have been spent 'on Medium Bombers and certainly not on the Fleet'. He then questioned the allocations, saying that more should be diverted towards research and development in order to make his proposals a reality.[222] Thomas defended a strong Navy with the same arguments Sandys had used in favour of a strong nuclear deterrent force, referring to a memorandum he had written that argued the importance of Britain contributing towards any overwhelmingly American Striking Fleet in order to have a 'voice in the employment of these forces'. Equally important was the belief that, without aircraft carriers, 'In the eyes of the rest of the world we would cease to be a major naval power'.[223] In spite of this appeal to emotion, Sandys was nevertheless able to convince Alexander that 'further consideration' of naval spending was required, before trying his luck and attacking their cruisers before the meeting was brought to a close.[224]

By this point Alexander was beginning to waver, coming round to the idea that any defence policy determined by Treasury limits would be 'far from satisfactory', as well as backing the Navy on the retention of aircraft carriers.[225] In an attempt to maintain the momentum of the Radical Review, the various departments were once again asked to submit detailed proposals for future defence policy. Perhaps sensing a softening in the Ministry of Defence position, inter-service rivalries began to make their influence known. The Admiralty submitted a lengthy defence of aircraft carriers, referring to their 'essential and not uneconomical' role as an important part of the deterrent, as well as appealing for a fleet 'worthy of a nation whose greatness is founded upon and whose survival depends on sea-borne trade'.[226] The Air Ministry, on the other hand, asked

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[221] Thomas had been Financial Secretary to the Admiralty during the Second World War, where, according to one biographer, he got 'his first opportunity of showing that attachment to the Royal Navy which was the ruling passion of his life'; Rose, K., 'Thomas, James Purdon Lewes, Viscount Cilcennin (1903–1960)', *Oxford Dictionary of National Biography* (Oxford University Press, 2004; online edition, May 2006).
[222] 'Radical Review: 10 November, 1953'; ADM 1/24695.
[223] 'The Role of Aircraft Carriers: Memorandum by the First Lord of the Admiralty, 9 November, 1953'; ADM 1/24695, R. D. P/P (53) 28.
[224] 'Radical Review: 10 November, 1953'; ADM 1/24695.
[225] 'The Radical Review: Memorandum by the Minister of Defence, 12 November, 1953'; CAB 134/809, D.P.(M) (53) 12; 'Naval Air: Memorandum by the Minister of Defence, 16 November, 1953'; CAB 134/809, D.P.(M) (53) 13.
[226] 'The Role of Aircraft Carriers: Memorandum by the First Lord of the Admiralty, 14 November, 1953'; CAB 134/809, D.P.(M) (53) 14.

whether it was a good idea 'to lock up £40 million of capital in a fleet carrier that can be sunk with one bomb?' Especially when 'The Russians' decision on whether to risk a war will depend on the air and land situations and not whether they think they can starve us out by sinking shipping'.[227]

The memorandum supplied by Sandys was once again a comprehensive document, this time going much further than his June contribution, and making his belief in the inexorable dominance of unmanned weaponry much more clear. This may have been because, as it reminded its readers, his previous recommendations for prioritising the opening phase had been accepted by Churchill; therefore he could now build upon his previous work. He may also have decided, having experienced the negative reactions from the Service Ministers and the Chiefs of Staff, that it was worth forcing the issue. In the event, his policy ideas were never adopted; but it is worth quoting his opening summary at length, because it would be revived in 1957 as the entire basis of his solution to providing Britain with a long-term defence policy based on economic stability. Having accepted the Treasury spending limits, and reiterated his desire to prioritise the 'decisive opening phase', he wrote that 'all other dangers are secondary' compared to aerial attack. On top of this, long-range rockets and atomic weapons meant that the 'prospects of providing any effective protection against air attack are continually diminishing'. Even with improved fighter and guided-weapon defences, he said, a proportion of enemy bombers would still find a way through, allowing them to 'inflict upon us fearful casualties and devastation'.[228]

These were all well-established points, and would not have altered existing priorities; but he added a caveat. Even if Britain could eventually mount a respectable defence against manned bombers, he suggested that by the time this was established the Soviet Union would probably have developed long-range rockets that could deliver atomic warheads into London from firing points in East Germany. The other departments had not even factored long-range rockets into their thinking, but here Sandys had sought to look beyond the narrow timescale preferred by the government and Chiefs of Staff. What is more, he was willing to take those thoughts to their natural conclusions, writing that 'we have no means of defence whatsoever' against long-range rocket attack', the

[227] 'Defence Priorities: Note by the Secretary of State for Air, 17 November, 1953'; CAB 134/809, D.P.(M) (53) 16.
[228] 'Defence Policy and Expenditure: Memorandum by the Minister of Supply, 20 November, 1953' (the printed copy is dated 19 November, but 20 November has been hand-written in); DSND 4/1/1.

practical effect of which meant that 'we cannot any longer protect our people in the event of war'. Therefore, he argued, 'we must concentrate our efforts on preventing it. In planning our forces, we must henceforth put the emphasis not so much on defences as upon deterrents'.[229]

This echoed the famous words of Bernard Brodie, who, having determined that there was no 'direct immunity to atomic bomb attack' in 1946, wrote 'Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them'. Brodie had looked ahead to a point where 'technological realities make reduction of vulnerability largely synonymous with a preservation of striking power', and here Sandys applied this idea to the policy-making process, making it the crux of his argument.[230] The implication of this point also had the effect of taking his June priorities further still. If the rise of unmanned weaponry would make it impossible to protect Britain, then the 'decisive opening phase' was truly decisive. Thus the assumed secondary phase of 'broken-backed' warfare was not only frivolous but practically impossible. With this in mind, Sandys pressed for a complete reallocation of spending. He wrote:

> We must therefore press ahead with the creation of a powerful bomber force, and the manufacture of atomic and thermo-nuclear weapons. We shall not have enough British-made atomic bombs to conduct even the most limited operations for at least five years. As an interim measure, we should ask the Americans to provide us with a small number of bombs out of their enormous stockpile.
>
> At the same time, we must develop long-range weapons of our own, either ballistic rockets of the V.2. type or flying guided missiles.[231]

He wrote that these programmes could be paid for with reductions in Army and Navy allocations, since a properly-equipped Army of more than eight divisions was probably going to be unaffordable in the long-term anyway, whilst the Navy was expected to play a reduced role under his policies, albeit one that would include coastal defence

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[229] *Ibid.*
[230] Brodie, B. (ed.), *The Absolute Weapon* (New York: Harcourt Brace, 1946), pp. 40 and 76-77.
[231] 'Defence Policy and Expenditure: 20 November, 1953'; DSND 4/1/1.

responsibilities. The opening statement finished by urging that the government plan for 'peace rather than defence', which meant 'build[ing] up offensive air power and atomic weapon production'. He explained how each branch of the Armed Forces could work within its new budget ceiling, but warned against cutting Ministry of Supply funding for 'projects which are important to the Services, civil aviation, and export trade'.[232] He elaborated on the likely effects of a Soviet attack from the air, which now 'might knock Britain out in the first fortnight, if not in the first few days', and how guided missiles would prove to be the best defence against Soviet bombers. This was then qualified with a section on long-range rockets which suggested that:

> It is known that the Russians have for some years been developing long-range ballistic rockets. They have been employing numerous German scientists and technicians, many of whom had previously worked at Peenemunde and other German experimental establishments.
>
> It is known that the Russians have perfected the German war-time V.2. rocket and may have put it into quantity production. This could carry a warhead of about one ton and would have a maximum range of about 220 miles.[233]

This brought Sandys back to the Second World War, and his fears of total destruction through rocket attack. Writing that the Soviets were known to be working on a rocket with a 35-ton thrust motor that could deliver a nuclear warhead into London from East Germany by 1956, as well as a device boasting a 100-ton thrust motor that promised an even longer range and a greater payload, his words recalled his papers from almost a decade ago. He attempted to hammer the point home by reflecting on his experiences in the Second World War, the memory of which would have been clear to Churchill and the Chiefs of Staff, and offered a concise recollection of his struggle against unmanned German weapons:

> Against attack by long-range ballistic rockets we have as yet no means of defence whatsoever. Once they have been launched we know of no method of diverting or destroying them. They can probably be fired from mobile

[232] *Ibid.*
[233] *Ibid.*

> launching gear transported by rail or road. The firing points, therefore, would offer unprofitable targets for counter-bombing. In the last war we were able to bomb experimental establishments and factories in Germany where the V 2 was being developed and manufactured, with the result that the rocket attack was delayed until the intended launching area in Northern France had been overrun by our troops. But, since we are at peace with Russia, no similar action to forestall attack is now open to us.[234]

Thus Sandys' wartime memories, which had themselves been altered by his reflection on them over time, officially became the basis of his policy proposals. The Nazi scientists were still the enemy, working for another totalitarian power and preparing the onslaught they could not complete ten years earlier. In addition to this, Sandys made the important point that prioritising deterrence over defence was particularly vital for Britain due to the Western democracies' unwillingness to contemplate preventative war. Because Britain could not keep its defences 'in a state of war-time readiness year in and year out', the Soviet Union held the initiative in being able to launch a surprise attack when it most suited them. Therefore, even with improved fighter defences, the protection of British cities was becoming less and less likely: 'The conclusion to be drawn is surely clear. If we no longer have the means of protecting ourselves in war, we must increasingly concentrate our energies and resources upon preventing it'.[235]

He went on to defend the prospective medium bomber fleet on deterrence grounds. He noted the utility of bombers as the 'most flexible of all weapons in our armoury', not least for their ability to sink large naval vessels; but it was as part of the nuclear deterrent that they were most valuable. This required, he said, that the British nuclear weapons programme 'be stepped up to the utmost extent', since air forces not equipped with them were 'inefficient and wasteful'. British medium bombers were, however, seen as a short-lived threat to the Soviet Union. At that time the Soviets had put little effort into defensive guided weapons, which meant the V-bombers would have stood a fair chance of breaching their defences. But Sandys did not expect this to last. He believed that if the Soviets developed defensive guided weapons, or even supersonic interceptors, then the V-bombers would prove hopeless if sent to attack targets deep into enemy territory. He predicted that this would be the case by 1960 at the earliest, and suggested

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[234] *Ibid.*
[235] *Ibid.*

that this left Britain with two choices. One was to lengthen the lives of the V-bombers by equipping them with self-propelled bombs. The other was to develop 'ballistic rockets of the V.2 type'. The former was ruled out as a temporary solution, easily countered with improved defences, especially those based in satellite nations between Britain and its targets in the Soviet Union. To support his argument Sandys once again called upon his projections of November 1944:

> In the field of guided missiles, we have up to present concentrated attention mainly upon defensive weapons. While maintaining this effort, we should now in addition give equal attention to the development of missiles for use in offensive rôles. This is an extremely urgent matter. We are already a long way behind both the Russians and the Americans in the development of long-distance bombardment weapons. If we neglect this any longer, we may well, in ten years' time when piloted bombers are becoming obsolescent, find ourselves without any means whatsoever of conducting counter-offensive air operations.[236]

This was quite an incredible statement. Sandys was proposing in 1953 that Britain should have been taking practical steps towards basing its ability to wage nuclear war entirely on unmanned weaponry. There had previously been some consideration given to offensive guided weapons, but this was going far beyond what anybody else in a prominent policy-making role had suggested. The 1947 review, with the Second World War still an obvious influence on proceedings, had predicted that the Soviets would be in a position to use atomic weapons as early as 1956, and that with German assistance they would by this point have developed 'rockets, [and] pilotless aircraft'.[237] Similarly, the 1950 review had recommended that planning 'includes provision for the day when the manned bomber is no longer usable'.[238] By 1952, however, guided weapons were seen merely as potentially valuable weapons for air defence, with the Chiefs of Staff equating a desire to avoid 'prohibitive loss to the attacker' with 'the right types of aircraft... and other scientific aids'.[239] In October 1953 the Chiefs of Staff had agreed 'in

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[236] *Ibid.*
[237] 'The Overall Strategic Plan: Report by the Chiefs of Staff, 22 May, 1947'; reproduced in Lewis, *Changing Direction*, pp. 370-85.
[238] 'Defence Policy and Global Strategy: Report by the Chiefs of Staff, 7 June, 1950' reproduced in Hamilton, K. A. and Yasamee, H. J. (eds.), *Documents on British Policy Overseas: Series II, Volume IV - Korea, June 1950 - April 1951* (London: HMSO, 1991), pp. 411-31.
[239] CAB 131/12, D. (52) 26.

principle' to protect the funding allocated for the development of unmanned weaponry; but there had been no suggestion of Britain basing its striking power on them, and there is little to indicate that the idea formed any substantial part of Establishment thinking.[240]

These were the policy recommendations that the Ministry of Defence had deemed 'revolutionary', and which would still prove controversial several years later as Sandys attempted to implement them as Minister of Defence. Recognising that Sandys was putting these ideas forward in 1953 is vitally important in any attempt at making sense of Sandys' period at the Ministry of Defence, as well as the nature of the defence debates in Britain during this decade and where the central tenets of Sandys' personal belief system were situated within it. As the subsequent section will demonstrate, Sandys' contributions to the policy-making process during the defence review of 1957 can only be properly understood when taking his recommendations as Minister of Supply into account, thereby acting to reinforce the idea of him possessing a consistent set of policy preferences that led to the formation of a coherent strategic concept based upon his belief that there could be no effective defence against unmanned weaponry.

Reaction

Whilst official thinking appeared to have gone backwards, Sandys had consistently looked towards the long-term. Unfortunately for him, the entire nature of British defence policy was not going to be drastically altered on the back of Ministry of Supply initiatives, and the committee kept its discussion to more manageable questions. Head accused Sandys of having paid too little attention to overseas commitments in order to put all of his efforts into deterrent weapons and the task of surviving the opening phase. Sandys said his strategic reserve would fill the gaps, but was unable to dispute the accuracy of his wider charge.[241]

The memoranda were discussed on 27 November, by which time the Chiefs of Staff had once again let it be known that their position on the 1952 review was the correct basis for defence planning. They also singled out Sandys for his 'valuable and far-reaching proposals', but witheringly noted that 'these proposals differ in some respects

[240] 'Radical Review - Research and Development Programmes: Report by the Defence Research Policy Committee, 15 October, 1953'; CAB 134/809.
[241] CAB 134/809, D.P.(M) (53) 5th Meeting: 23 November, 1953.

from accepted strategic policy'.[242] Churchill and McGrigor debated the new priorities, with the former taking his cue from Sandys and arguing that land-based bombers could attack submarine bases and lay mines much more effectively than the Navy could. Sandys drew attention to the 'considerable rocket development' taking place in the Soviet Union as a way of emphasising the need to fund a genuine deterrent, which he said aircraft carriers were not.[243] Churchill was clearly leaning more towards Sandys' position on aircraft carriers at this point, but he remained sentimental about the Navy, and, recalling his own experiences of the Second World War, hesitated to make a decision without another review of naval aviation.[244]

This bought the Chiefs of Staff some valuable time, and in retrospect it can be seen that this delay sapped all momentum from the Radical Review, largely serving to defeat its original purpose. McGrigor had previously sought to unify his colleagues against budget reductions, and in December he came to a private understanding with Dickson about the future of naval aviation. Whereas Slessor was on record as having little regard for aircraft carriers, Dickson came round to the Admiralty view that they were essential aspects of the deterrent, and appeared genuine in doing so.[245] In one sense this served to validate what the Ministry of Supply had been doing in the meantime, as, according to Grove, Sandys had been deliberately holding up the progress of the N.A. 39, presumably in accordance with his belief that equipment programmes became increasingly difficult to cancel once development had got underway.[246] On the other hand, his campaign against it would ultimately prove unsuccessful, so he had in fact created some of the delays the N.A. 39 suffered from.

When the Radical Review re-started in January 1954, Alexander had by this point firmly distanced himself from his earlier enthusiasm for Sandys' position. Rather than focus on strategic matters, which would have carried less weight with Churchill who was still committed to prioritising the opening phase, he stressed the expected '*political consequences*' of Sandys' ideas instead. These were thought to include a loss of service morale, controversy at home owing to 'the country's traditional affection and support for

[242] 'United Kingdom Defence Policy: Memorandum by the Chiefs of Staff, 27 November, 1953'; CAB 134/809, D.P.(M) (53) 17.
[243] CAB 134/809, D.P.(M) (53) 6th Meeting: 27 November, 1953.
[244] He thought 'numbers of smaller ships' would be needed for anti-mine and anti-submarine duties, conceding one of the main principles of 'broken-backed' warfare to the Admiralty, and using the 'lessons of World War II' to support his point; Grove, *Vanguard to Trident*, p. 95.
[245] Baylis, *Ambiguity and Deterrence*, p. 168; Grove, *Vanguard to Trident*, p. 107.
[246] Grove, *Vanguard to Trident*, p. 105.

the Royal Navy', and the loss of influence on United States naval planning. Alexander thought Britain should retain a heavy aircraft carrier as a contingency, and have it carry out lighter duties, but not take on a strike role.[247] The Admiralty sensed this shift and began to question his plan to 'retain heavy Carriers, but not allow us to use them', making it clear once more that 'any cuts imposed should not reduce the Fleet Air Arm'. They sought to confirm the position that Alexander had started to move towards, claiming that in return for a relatively minor saving, Alexander would oversee the loss of British influence over American policy, jeopardise British involvement in NATO, sacrifice strategic flexibility, and baffle international opinion. They also reversed his argument and applied it to the Air Force. After all, why rely on the United States at sea, but not depend wholly on its strategic bombing force for deterrence?[248]

The critical decision, as far as the Radical Review and Sandys' time at the Ministry of Supply were concerned, was taken at a February meeting which Sandys was unable to attend due to illness. McGrigor made a passionate defence of the need to be able to destroy an enemy fleet, as the Navy 'had traditionally done from the days of Sir Francis Drake at Cadiz', which meant the N.A. 39 had to go ahead. Thomas backed him up with 'political arguments', such as the loss of influence on American policy. Churchill, despite repeating his belief that land-based aircraft would eventually carry out 'everything which naval strike aircraft claimed to do', was all-but won over. He deferred a decision on the N.A. 39 and agreed to keep two heavy carriers in commission; but seeing as these carriers would have obviously required aircraft at some point, the decision on the N. A. 39 was essentially made.[249]

Churchill had been swayed by the arguments relating to American policy, as well as direct lobbying by the Admiralty. Grove also suggests that whilst Churchill was 'anticarrier and antinavy' by the end of the process, albeit due to his concept of naval warfare being one of 'dreadnoughts rather than carriers', everybody - himself included - knew he that was no longer capable of 'ramming through an unpopular program of carrier cuts on his own authority'.[250] One man who might have been capable of aiding

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[247] 'Naval Air: Note by the Minister of Defence, 26 January, 1954'; CAB 134/809, D.P.(M) (54) 1.
[248] 'Naval Air: Note by the First Lord of the Admiralty, 27 January, 1954'; CAB 134/809, D.P.(M) (54) 2; that idea had been tentatively raised back in July, when Dickson attempted to defend a bomber force larger than what had been recommended in the 1952 review; Clark and Wheeler, *The British Origins of...*, p. 189; Grove, *Vanguard to Trident*, pp. 105-6.
[249] CAB 134/809, D.P.(M) (54) 2nd Meeting: 26 February, 1953.
[250] Grove, *Vanguard to Trident*, pp. 114-15.

him in ramming through an unpopular programme was Sandys, but it is widely accepted that it was only Sandys falling ill at this decisive moment that prevented him winning the argument and seeing the Navy reduced in size and status.[251] With Sandys on the sidelines at this critical point, the Admiralty began to win its arguments, standing firm and mounting counter-attacks against the prevailing Air Force-dominant narrative. Sandys made something of a last stand in March, advising Butler to 'err on the side of cutting defence expenditure too much than too little', and reminding him that long-term savings could only be accomplished through a 'reassessment of the relative importance of the roles of the three services'.[252] In spite of this, McGrigor was successful enough in his defence of naval functions to have a section included in the 1954 Defence White Paper that read: '[I]f no decisive result were reached in this opening phase, hostilities would decline in intensity, though perhaps less so at sea than elsewhere, and a period of "broken-backed" warfare would follow'.[253]

Whilst still attaching significant weight to Sandys' absence, Baylis has also described the postponing of a decision on the N.A. 39 as having reflected the uncertainty of Ministers who were hesitant to follow the 'June Directive' through to its logical conclusions. This he writes was largely due to a collective 'lack of expertise in strategic matters' that made them 'reluctant to impose their ideas on the Chiefs of Staff'.[254] However, just one month after the 1954 White Paper had made its way through the House of Commons, the government re-opened the Radical Review when Churchill assembled a committee to discuss the manufacture of a British thermonuclear weapon. The Chiefs of Staff were unwilling to comment formally until they had finalised their report on the issue, but Sandys, perhaps sensing an opportunity to regain the momentum he had built up over the previous winter, struck first. In a May meeting between the Cabinet and the Chiefs of Staff, he called for quick decisions on the basis that 'major items of equipment' could take up to three years to introduce, and returned to his calls for a reassessment of priorities. If thermonuclear weapons multiplied the destructive

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[251] Baylis, *Ambiguity and Deterrence*, p. 169; Clark and Wheeler, *The British Origins of...*, p. 200; Grove, *Vanguard to Trident*, p. 115; Navias, *Nuclear Weapons...*, p. 83.
[252] He even included an old Second World War report from his previous Ministry of Supply stint, detailing how he managed to 'comb the tail' of the Middle East Command and reduce its administrative staff by thirty thousand men; Sandys to Butler: 18 March, 1954; DSND 15/4.
[253] *Statement on Defence 1954* (London: HMSO, 1954).
[254] Baylis, *Ambiguity and Deterrence*, p. 177; Malcolm Chalmers has suggested that the Navy benefitted from its 'enormous symbolic importance in British politics', and that there was an institutional unwillingness to make significant alterations to naval policy by 'those reared to administer an Empire based on British naval supremacy'; Chalmers, M., *Paying for Defence: Military Spending and British Decline* (London: Pluto Press, 1985), p. 64.

power of the air offensive, then the logic of his June and November recommendations became even more apparent, and he was unequivocal in his support for a British thermonuclear weapon:

> Our ability to put up an effective defence against air attack was decreasing and we ought, therefore, to concentrate on measures calculated to prevent war rather than on measures of defence, which were rapidly becoming obsolete. We must have the power to retaliate. In particular, we should secure supplies of hydrogen bombs, from the United States or from our own production; and we must have enough bomber aircraft to carry the hydrogen bombs at our disposal. The next stage of development would be the ballistic rocket, against which there was no foreseeable form of defence.[255]

He then informed those present that his American counterparts had been in contact with the Ministry of Supply to suggest a measure of collaboration between the two countries on the construction of these long-range rockets. This collaboration was to proceed on the basis of Britain concentrating on a medium-range weapon and leaving the United States to develop an inter-continental weapon.[256] Sandys had held preliminary discussions on this issue with Charles Wilson, the United States Secretary of Defence (1953-57) the previous December, and now set out for Washington for further talks. Before leaving he wrote to Wilson setting out his wishes for the standardisation of smaller guided weapons, economic concessions in terms of dollar payments, and for measures aimed at avoiding a 'duplication of effort'.[257]

Whilst Sandys was away, the Chiefs of Staff published their updated advice. They reported that the world situation had been 'completely altered' by thermonuclear weapons that had 'no theoretical limit' to their power, concluding that 'More than ever the aim of United Kingdom policy must be to prevent war'.[258] This would have pleased Sandys, as would the belated recognition that the 'ballistic rocket threat' would eventually render any conceivable system of air defence obsolete. The report also did little to downplay the threat posed by thermonuclear weapons, and even admitted that

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[255] CAB 134/808, D.P. (54) 2nd Meeting: 19 May, 1954.
[256] *Ibid.*
[257] Sandys to Wilson: 29 May, 1954; DSND 4/6.
[258] 'United Kingdom Defence Policy: Report by the Chiefs of Staff, 1 June, 1953'; CAB 134/808, D.P. (54) 6.

Britain may 'receive such damage from nuclear bombardment in the opening days of a war that it cannot continue to function as a main support area'. When it stated that British strategic policy should be to 'possess the means of waging war with the most up-to-date nuclear weapons', in tandem with a policy of containing communism, it would have appeared that the Chiefs of Staff had taken Sandys' recommendations almost wholly on board.[259]

On the other hand, the report did not go into any real depth about the functions of each service under this revised policy. It was suggested that the protection of sea communications and mine-sweeping operations would be accorded a lower priority, and instructed the Admiralty to undertake another review of its functions; but its suggestion that preventing war was wrapped-up with 'our position as a world Power' implied that a strong navy would remain essential, since many of the arguments used by the naval lobby had stressed the connection between British status and a powerful surface fleet. By the same token, their position on air defence was not carried through to its logical ends, and they maintained that Britain required an 'efficient fighting force, [that] satisfies public opinion and demonstrates to the Russians that an attack against this country would require a substantial effort on their part', as if even a handful of thermonuclear weapons, whether delivered by manned or unmanned weapons systems, would not have constituted a 'substantial effort'.[260]

In the United States, Sandys was impressed by tours of experimental guided weapon establishments, and a joint *communiqué* was issued promising further cooperation. When he arrived back in Britain he told the press that he was 'hopeful' that the talks could prove helpful in developing 'these vitally important new weapons', but no formal agreement had yet been reached.[261] However, he immediately reported to Churchill that, whilst in Washington, he had been taken to meet Eisenhower. This meeting was not reported by the press, so had presumably remained secret, but he claimed that Eisenhower had told him that 'in the event or threat of war, the United States intended to allocate a certain number of atomic bombs to Britain', and that their plans were proceeding on that basis. Sandys said he had pointed out to Eisenhower that re-fitting British planes to carry American weapons would be difficult at short notice, and

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[259] *Ibid.*
[260] CAB 134/808, D.P. (54) 6.
[261] "Guided Missile Development." *Times* [London, England] 15 June 1954: 6. *The Times Digital Archive*.

requested detailed information on their 'external dimensions and fittings', which was something Churchill had previously asked for. Eisenhower agreed that this information would be necessary, but said that to provide it he would need to find a way around the Atomic Energy Act of 1946 (McMahon Act), which prohibited the United States from sharing its nuclear technologies.[262] Regardless of the practical difficulties that the McMahon Act might have presented, Sandys believed this to have been the first time the President, or anybody in a senior policy-making role, had given a definite promise to supply Britain with atomic weapons in wartime, and in the next Defence Committee meeting, after Sandys had recommended a formal agreement on the basis that Britain would stand to benefit far more from it than the United States would, the Secretary of State for Air confirmed that he too had been contacted by his counterparts expressing a willingness to share the information Britain needed to use their weapons.[263]

The Cabinet Defence Committee gave the thermonuclear bomb project the go-ahead on 16 June, after a recommendation from the Chiefs of Staff, and the Cabinet followed with their support a month later; but this on-going process had led to the possibility of a renewed attempt at reducing spending when the Chiefs of Staff were asked to consider the effects of thermonuclear weapons on British policy.[264] The prospect of British thermonuclear weaponry put a renewed emphasis on strategic bombing, which brought supposedly settled matters back into the spotlight. The Navy was quick to suggest that increasingly destructive warheads meant that the Air Force required less bombers to meet its targets - something which Sandys had pre-emptively warned against.[265] He threw the Ministry of Supply behind the V-bomber programme on the basis that, despite working on an agreement for closer cooperation with the United States, it remained 'essential that we should have under our own control in war the means of attacking effectively those targets which we considered of prime importance'.[266] The Navy still made these arguments as well, and although willing to make concessions on

[262] Sandys to Churchill: 15 June, 1954, reproduced in 'Supply of Atomic Bombs by the United States: Note by the Secretary of the Cabinet, 18 June, 1954'; CAB 134/808, D.P. (54) 8.
[263] CAB 134/808, D.P. (54) 8; CAB 134/808, D.P. (54) 4th Meeting: 24 June, 1954.
[264] 'Hydrogen Bomb Research and Production in the United Kingdom: Memorandum by the Chiefs of Staff, 9 June, 1954'; CAB 134/808, D.P. (54) 7; the decision to go ahead, and to keep the programme secret, was made in CAB 134/808, D.P. (54) 3rd Meeting: 16 June, 1954; see also: Grove, *Vanguard to Trident*, p. 110; Hennesy, P., *Cabinet* (Oxford: Basil Blackwell, 1986), pp. 136-37.
[265] Clark and Wheeler, *The British Origins of...*, p. 200; CAB 134/808, D.P. (54) 1st Meeting: 4 May, 1954.
[266] CAB 134/808, D.P. (54) 6th Meeting: 6 July, 1954.

minesweeping and manpower under the new strategic outlook, it insisted on keeping its carriers.[267]

Two of Sandys' last acts as Minister of Supply brought his interests together. Firstly, the Chiefs of Staff circulated a report on air defence that recommended slight reductions in fighter strength; suggested that the Soviets would not be able to attack with 'surface-to-surface ballistic missile[s] with an H-head' until at least 1960; and said anti-aircraft guns were now all-but pointless except in protecting low-level attacks against the early-warning system, although the report did concede that public opinion might necessitate the retention of a token force.[268] In the meeting that debated the report, Sandys said that 'Ministers should consider the likely trend further ahead', since there was no telling what solutions could be found to even the ballistic missile problem. He felt the Soviet Union would possess a viable missile threat before 1960, which meant greater emphasis needed to be placed on the development of similar weapons in Britain.[269] His second act brought the carrier issue back into his sights. In the latest attempt to solve the question, another committee was set up, this time under Philip Cunliffe-Lister, Secretary of State for Commonwealth Relations. Cunliffe-Lister had been the Secretary of State for Air during the re-armament programme that took place before the Second World War, and he was joined by Sandys and Nigel Birch, previously of the Air Ministry.[270] The Navy made its case against what it considered to be a deliberately biased panel, but it was no surprise when this group reported in November that continuing to finance naval aviation 'appears to impose a burden disproportionate to the results', and they proposed scaling back the Navy.[271]

Unfortunately for Sandys, in October he was moved to the Ministry of Housing and Local Government, and his replacement at the Ministry of Supply, Selwyn Lloyd, was more appreciative of the defence McGrigor was once again forced to make of his aircraft carriers - something which Grove refers to as 'perhaps his finest hour'.[272] The same re-shuffle had seen Alexander replaced by Macmillan, who did not think that

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[267] CAB 134/808, D.P. (54) 12; CAB 134/808, D.P. (54) 6th Meeting: 6 July, 1954.
[268] 'Air Defence of the United Kingdom: Memorandum by the Chiefs of Staff, 7 July, 1954'; CAB 134/808 D.P. (54) 13.
[269] CAB 134/808, D.P. (54) 6th Meeting: 9 July, 1954.
[270] Grove, *Vanguard to Trident*, p. 111.
[271] *Ibid.*, pp. 111-12; ; Clark and Wheeler have suggested that McGrigor and the naval establishment were spurred on by the 'motivated bias' and 'obvious opposition' of the Committee; Clark and Wheeler, *The British Origins of...*, pp. 201-2.
[272] Grove, *Vanguard to Trident*, pp. 113-14

expending massive amounts of political capital for relatively small savings was worthwhile, so was unwilling to drastically alter the role of the Navy as Sandys might have done.[273] The 1955 Defence White Paper he would eventually deliver therefore went on to describe the aims of British policy as 'impressing on a potential enemy that a sudden attack even with nuclear weapons would not be conclusive', and allocated resources, albeit 'on a lower priority', for 'continuing operations after the initial phase, particularly at sea'.[274] The Navy had won. The doctrine of 'broken-backed' warfare had survived the Radical Review, and the Navy was looking forward to its nuclear strike role.

Conclusion

In December, Churchill sent a note to members of the Cabinet that he had prepared for Britain's representatives at the NATO council, which opened by referring to 'Defence by Deterrents' as the 'only sane policy' for Britain.[275] Churchill discussed the possibility of the United States launching a 'forestalling' attack on the Soviet Union, which he felt was unlikely, and of the Soviet Union attempting something similar. This outcome, as well as being 'more grievous', was 'less improbable'. Consequently, Churchill believed that the West had to ensure its nuclear superiority was 'expanded, improved, and varied' in order to make it clear that any surprise attack would be met with 'immediate retaliation'.[276] This he was certain 'would make the Deterrent effective except in the case of lunatics, or dictators or plotters in the kind of position of Hitler in his final phase'.[277]

He had refused to follow Sandys' recommendations fully during the Radical Review, and used this note to credit 'conventional forces' as playing a 'vital part in our security'; but here Churchill was effectively circulating Sandys' central arguments of June and November 1953.[278] Sandys had never written the Army and the Navy out of British

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[273] A loose note in Macmillan's archive reads 'The Board of Admiralty feel strongly about this matter and are stating their reasons in a separate paper. My predecessor, Field Marshal Lord Alexander, gave his support to the Admiralty view... With my limited experience I find it difficult to give any instructive opinion, but I am bound to say that two considerations weigh with me: (a) the trouble we shall have with N.A.T.O.; (b) the absurdity of these ships going about half armed - the full overhead and half the effect'; the Papers of Harold Macmillan, the Earl of Stockton (1894-1986); Bodleian Library, Oxford; MS. Macmillan dep c. 295, f. 129.
[274] *Statement on Defence 1955* (London: HMSO, 1955).
[275] 'Notes on Tube Alloys, 1954: Note by the Prime Minister, 14 December, 1954'; DSND 15/4.
[276] *Ibid.*
[277] *Ibid.*
[278] *Ibid.*

defence policy, but he had unashamedly put his faith in deterrence through nuclear striking power as the 'only sane policy' well before Churchill was willing to admit as much so bluntly, and also far in advance of the Chiefs of Staff reaching much the same conclusions. Whether Sandys' policy preferences would have been practical at the time is difficult to judge, but it is clear that he had formulated something approaching a coherent strategic vision that was radically different to that of the Chiefs of Staff. Equally clear is the influence of his Second World War experiences on this vision, with his memoranda at times resembling copies of his wartime reports on the German unmanned weapons threat.

Throughout the Radical Review process, Sandys had not shown any reluctance to defend his ideas against supposed expert opinion, nor had he shied away from taking his observations to their logical conclusions. Perhaps strengthened by his experience in the Second World War, Sandys was unafraid of challenging what he saw as the cosy consensus of the professional military and scientific elites. After Sandys departed the defence policy-making process, the lack of this self-belief in his successors allowed the defence debates between the services and the Treasury to return to familiar territory. On top of this, a succession of Defence Ministers followed Macmillan, who only lasted six months himself before being promoted to Foreign Secretary. None of them lasted a full year. The effect of this was to eliminate any chance of radical approaches to long-term decision making. In April 1955 Lloyd replaced Macmillan and attempted to oversee a Long Term Defence Programme, but he was gone by Christmas, promoted to Foreign Secretary to replace Macmillan who headed to the Treasury. Without the stability brought to defence policy-making process by Churchill and Alexander, which the Radical Review had for a while promised to benefit from, successive Ministers of Defence were unable to really get to grips with reforming British defence policy. It was only after the shock of the Suez Crisis that a serious attempt to rethink defence was made when Macmillan, who had passed through the Ministry of Defence and realised its weaknesses, tasked Sandys with finally setting defence policy on a sustainable footing and gave him considerably increased powers to do so.

The 1957 Defence White Paper

In October 1959, following Sandys' departure from the Ministry of Defence, the Central Office of Information sent him a revised version of the brief biographies they maintained for each member of the government, inviting him to edit it as he thought necessary. The document described his time at the Ministry of Defence as being characterised by 'planning the reorganisation of Britain's defence forces in the light of developments in modern warfare and the need to relieve the strain on the nation's economy'. Sandys did not object to this section, but when it said he was 'largely responsible' for the White Paper of April 1957, he made sure to correct the record, removing the word 'largely' from the text.[279]

Given that, as will be explained in the following sections, Sandys was removed from the Ministry of Defence because his policies were proving difficult to implement, and also because he had alienated all but a few of those involved in the defence policy-making process, this minor incident reveals a remarkable unwillingness on Sandys' part to distance himself from what many perceived to be his failures, even though he had previously been willing to do so when it had suited him. During his short stay at the Ministry of Defence, Macmillan had blamed Sandys for the problems affecting the Supermarine Swift, a jet interceptor whose service life would ultimately prove short, accusing him of concealing development issues from colleagues, and complaining that it was left to him to 'whitewash the Churchill, Alexander, Duncan Sandys regime'.[280] Why, then, was Sandys willing to associate himself with his alleged failures this time? Especially failures that, unlike the Swift - which only related to one failed project of many - were much more public and potentially damaging to his career?

Richard Powell, who served as the Permanent Secretary to the Ministry of Defence during Sandys' time there, would later recall that, although drafting of the White Paper was a 'joint effort' between the two of them, Sandys was 'the undoubted leader all the way through'. As somebody who had been at the Ministry of Defence since 1946 (save for a two year spell at the Admiralty between 1948 and 1950), Powell was well placed to admit that Sandys never 'contributed all that much which was original to the content

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[279] 'The Rt. Hon. Duncan Sandys, M.P.: Biography Service, Reference Division, Central Office of Information, 27 October, 1957'; DSND 15/4.
[280] Diary entries of 27 January and 11 February, 1955; Catterall, *Macmillan Diaries... 1950-1957*, pp. 385-86 and p. 392.

of the White Paper'.[281] However, when asked how things might have been different had somebody other than Sandys been in charge of the policy-making process, Powell said that the 'references to ballistic missiles and to missile defences instead of fighters and bombers' were things that Sandys 'certainly put in himself', and that, had anybody else been in charge, 'I do not think the thing would have been carried through in the form it was and would not have emerged as it did'.[282]

It is between these two points that the existing historical appraisals of the 1957 White Paper leave something to be desired. Historians have largely accepted that Sandys offered little in the way of original thinking, choosing instead to emphasise continuity, albeit whilst giving Sandys credit for bringing several existing trends together and managing to override objections in doing so.[283] Alongside this, however, the importance of Sandys' policy preferences has been neglected, with historians stressing a willingness to make large-scale reductions in spending and manpower as his primary contribution. Groom concluded that 'above all', the decisions in the White Paper 'were motivated by notions of economy and prestige', whilst Navias writes that Sandys' 'prime intention' was 'securing savings through manpower reductions', and that he did not set out to balance these reductions with a consistent balance between conventional and nuclear forces.[284] It is true that Sandys was focussed on securing marked reductions in manpower and expenditure; but this was only achievable because of the alternative policies that Sandys forced through.

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[281] Richard Powell's contributions to 'Defence Turning Point: The Sandys White Paper' in *Contemporary Record*, Vol. 2, Issue 4 (1988), p. 30; Macmillan would go on to claim that the White Paper 'constituted the biggest change in military policy ever made in normal times', and credit Sandys for this 'revolution in post-war military thinking'; Macmillan, H., *Riding the Storm: 1956-1959* (London: Macmillan, 1971), pp. 263-66; Sandys himself said in the defence debate following the publication of the White Paper 'Some people say that the policy in the White Paper is revolutionary; others say that there is nothing new about it. Both are perfectly correct. The policy in the White Paper embodies many ideas which, as hon. Members well know, have been on more than one occasion expressed in earlier defence debates in all quarters of the House, in the Press, and in the country generally. What is new about the White Paper is not the ideas which it contains, but the Government's decision that the time has now come when it is right and safe to base decisions upon it'; Hansard HC vol 568 col 1758 (16 April, 1957).

[282] Way added 'Duncan was not a natural accepter of other people's drafts'; 'Defence Turning Point', p. 30.

[283] Baylis, *Ambiguity and Deterrence*, p. 245; French, *Army, Empire, and Cold War*, p. 160; Groom, *British Thinking About Nuclear Weapons*, p. 92; Navias, *Nuclear Weapons and British Strategic Planning*, p. 135 and pp. 251-52.

[284] Groom, *British Thinking About Nuclear Weapons*, p. 581; Navias, *Nuclear Weapons and British Strategic Planning*, p. 148; Baylis, citing Navias in his argument, agrees that 'Sandys had a single-minded determination to reduce manpower costs but he does not appear to have linked this requirement to the strategic need to put greater emphasis on nuclear deterrence in defence planning... Although the White Paper, therefore, seemed to indicate a clearly thought-out shift of strategic priorities; a good case can be made that, in practice, economic and political calculations were more important criteria for the Defence Secretary'; Baylis, *Ambiguity and Deterrence*, pp. 249-50'.

The deficiencies of this approach can be seen in Baylis citing a July 1957 article by Slessor in support of his contention that the White Paper 'reflected the culmination of past endeavours'.[285] This neglects an important contextual point. The Slessor article in question claimed that the White Paper introduced 'no basic revolution in policy, but merely rationalizes and (probably for the first time) explains in admirably intelligent form tendencies which have long been obvious'.[286] This does point towards a degree of continuity, as Baylis rightly observes. But this statement has to be qualified by the fact that Slessor had been every bit as devoted to the decisive superiority of nuclear striking power as Sandys, and had been talking up unmanned weaponry and denigrating aircraft carriers since the late 1940s.[287] What Slessor had considered to be 'tendencies which have long been obvious' did not necessarily correspond with the accepted wisdom prevalent within the Ministry of Defence or on the Chiefs of Staff Committee. Indeed, Slessor used this article to criticise the White Paper in terms reminiscent of Sandys' 1953 recommendations, writing that its failure to follow the logic of its main arguments in favour of prioritising the decisive opening phase meant that 'we are not taking advantage of the economies which would flow from the acceptance of the short war assumption'.[288]

Although Sandys' powers at the Ministry of Defence were strengthened by a directive from Macmillan, giving him more control over the policy-making process than any of his predecessors, this did not mean that he was able to unilaterally impose significant alterations on the Armed Forces. However, by paying particular attention to what had

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[285] Baylis, *Ambiguity and Deterrence*, p. 246.

[286] Slessor, J. 'British Defense Policy' in *Foreign Affairs*, Vol. 35, No. 4 (July, 1957) reproduced in Slessor, *The Great Deterrent*, pp. 301-14.

[287] In *Some British Strategic Problems* (1948) Slessor said that the Navy remained 'of vital importance', but only as 'an anti-air and anti-submarine navy'. He expanded on this by adding 'the battleship and the heavy fleet carrier are irrelevant in these days... I believe the fleet action to be as dead as the Dodo.... I think the carrier or heavy ship that floats about within easy range of future shore-based aircraft will be blown out of the water. And, when people speak as I have heard them do, of using carriers to extend the range and penetration of a future bomber offensive I think they are allowing their thought to roam in a world as remote from reality as the other side of Alice's looking-glass'; *Some British Strategic Problems* in *Ibid.*, pp. 78-79; it should be pointed out that whilst Slessor would often state his expectation that unmanned weaponry would come to replace manned bomber aircraft, he does not appear to have been quite as convinced by them as Sandys, and his biographer has suggested that he simply 'ignored' the increasing vulnerability of manned bombers, as well as paying little attention to 'the economic and military folly' of expecting an impoverished Britain to maintain an expensive bomber force as the basis for its nuclear capability; Orange, V., *Slessor: Bomber Champion: The Life of Marshal of the RAF Sir John Slessor, GCB, DSO, MC* (London: Grub Street, 2006), p. 235.

[288] He also said that this meant Britain was getting 'the worst of both worlds', because the White Paper also made little effective preparation 'for a prolonged global war'. Although this was something of a lesser criticism, seeing as he thought any 'modernized version of 1939-45' was 'inconceivable in a thermo-nuclear and guided missile age'; 'British Defense Policy' in Slessor, *The Great Deterrent*, p. 302.

previously been Sandys' main areas of concern during the Radical Review, it can be shown how in spite of 'other variables' attempting to force him off course, Sandys consistently adhered to his well-developed belief that Britain should prioritise the opening phase of any future global war, and that all strategic calculations had to bear in mind what he considered to be the inexorable progress of unmanned weaponry. This section, by looking at Sandys' first few months at the Ministry of Defence up until the publication and defence of the White Paper, seeks to demonstrate how Sandys' brought the policy preferences he had developed from his experiences of the Second World War into a policy-making process over which he exerted a significant degree of control, and how this enabled him to lay the foundations for his later attempts at making his 1953 recommendations a reality.

The Political and Strategic Context

It has already been mentioned how, in the immediate aftermath of the Suez Crisis, Eden had expressed his wish that Britain should attempt to become less dependent on the United States for its nuclear strike capability, but this was just one aspect of his post-Suez defence review. In his note on 'Long Term Defence Policy' in December 1956, Eden also made clear his desire to see British defence policy reorganised 'on the principle of smaller Forces equipped with fully up-to-date weapons'.[289] The Minister of Defence at this point was Head, who as Secretary of State for War had provided conservative counters to Sandys' Radical Review ideas, (Walter Monckton, his predecessor, had resigned over his opposition to Eden's Suez policy), and he was instructed to begin working with the Service Ministers on another review of policy. This instantaneous reaction to the failures of Suez, a devastating psychological blow to British superpower pretentions, was the latest in a succession of appeals for spending reductions and greater efficiency. However, following a period of post-war consolidation, the British public had by this point come to expect that an economically sustainable defence settlement would be reached. This was particularly so as new technologies were increasingly being touted as capable of reducing the burdens defence spending placed on the British economy.[290]

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[289] 'Long Term Defence Policy: Note by the Prime Minister'; PREM 11/1778 PR (56).
[290] Daalder, H., *Cabinet Reform in Britain: 1914-1963* (Stanford: University Press, 1964), pp. 188-89; see also: Groom, *British Thinking About Nuclear Weapons*, pp. 205-7.

The Chiefs of Staff had actually commissioned a minor review of policy just weeks before the Suez Crisis began. This had attempted to address all aspects 'short of Global War', but was scrapped in the wake of Suez in favour of an updated report that acknowledged 'some tasks which have previously been regarded as commitments cannot now be met'.[291] It is difficult to gauge from the official documents how the Chiefs of Staff felt about another review. Where Dermot Boyle, the Chief of the Air Staff, said it was 'inevitable' that Britain would no longer be able to meet what the Chiefs of Staff perceived to be its strategic requirements if another round of spending reductions was implemented, it is hard to say whether this constituted an attempt to embrace new realities or to fix his position against them.[292] Unlike Slessor, who was completely devoted to strategic bombing, Boyle had more ambiguous allegiances to, and conceptions of, air power. Whilst he had spent much of the Second World War in heavy bombing roles, prior to becoming Chief of the Air Staff he had been Commander-in-Chief of Fighter Command. Where the bombing aircraft upon which the British nuclear deterrent depended might have been expected to survive any post-Suez review of defence policy, any measure of colonial retreat that it might have advocated would have put British fighter strength at risk. If Boyle had only adopted his position with some reluctance, then Louis Mountbatten, the First Sea Lord, demonstrated a greater hostility to significant changes being made in choosing to stress the role of the Chiefs of Staff in keeping politicians on track.[293]

When Eden unexpectedly resigned on 9 January 1957 owing to ill health, he was succeeded by the Chancellor of the Exchequer, Macmillan. Macmillan had effectively killed off the Radical Review when he had occupied the Ministry of Defence, being unwilling to expend political capital taking bold decisions whilst Churchill was in no real state to fully support him. He was by no means a reactionary in defence matters, however, recalling that he had arrived at Number 10 wanting to see defence policy finally 'take full account of the impact of nuclear weapons', as the Radical Review had

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[291] 'Strategic Implications of the Long Term Defence Policy: Note by the Directors of Plans, 31 December, 1956'; DEFE 4/94, J.P. (56) Note 14.
[292] DEFE 4/94, C.O.S. (57) 1st Meeting: 1 January, 1957.
[293] *Ibid.*; another clue as to how Boyle felt comes from an exchange with Powell on the subject of compensation for those likely to be affected by force reductions. Powell had written to his civil service colleagues to say that Head had planned 'that those who may have to be axed will be generously treated', to which Boyle replied 'I would have thought that if you do your business properly the number of personnel that suffer will be negligible'; Powell to E. W. Playfair: 11 January, 1957 and Boyle to Powell: 16 January, 1957 in AIR 8/2157.

originally intended.[294] In addition to this, Macmillan had come to see military experience as vital when attempting to formulate policy in related areas, and even in making somebody a 'complete man'.[295] This belief was a result of his experiences in the Grenadier Guards during the First World War, where he earned a reputation for bravery and was seriously wounded during the Battle of the Somme.[296] His memoirs also reflected this, containing sharp criticisms of previous Conservative Prime Ministers who, through their lack of experience in military matters, were deemed by Macmillan to have had no real understanding of the defence policy-making process.[297]

Macmillan had started out at the Ministry of Supply during the Second World War, but he had soon risen to represent the British government in the Mediterranean Theatre, where he had worked closely with Alexander. So closely, in fact, that Alan Brooke, the wartime Chief of the Imperial General Staff, came to suspect that Macmillan was 'donning the coat of Supreme Commander' himself.[298] Macmillan maintained an interest in defence issues, and often took to his diary to bemoan the policies of the government in which he served. In May 1952, whilst the Minister of Housing and Local Government, he wrote that military spending had to be redirected away from 'useless weapons (like anti-aircraft guns)', and towards 'the new and unconventional weapons by which alone (if war came) we could hope to resist the Russian masses'.[299] In November 1954, having only just been promoted to the Ministry of Defence, he recorded his thoughts on what he considered to be the main problem facing British defence policy:

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[294] Macmillan, H., *Riding the Storm: 1956-1959* (London: Macmillan, 1971), p. 240.
[295] 'Any man who, of his own choice, misses or shirks such an opportunity [to go to war] is not a complete man'; Macmillan, *Winds of Change*, p. 99.
[296] Macmillan, *Winds of Change*, p. 95; by this point he had already suffered two concussions, one from a bullet grazing his head and another from a shell fragment, as well as being shot through the hand at the Battle of Loos which left him with lasting difficulties. Guardsmen would go on to describe those responsible for acts of bravery as 'nearly as brave as Mr. Macmillan'; Matthew, H. C. G. 'Macmillan, (Maurice) Harold, first Earl of Stockton (1894–1986)', *Oxford Dictionary of National Biography* (Oxford: University Press, 2004; online edition, January, 2011).
[297] Stanley Baldwin, the Leader of the Conservative Party (1923-37) and Prime Minister (1935-37), was criticised for having had 'no personal experience of the fighting Services', or any related administrative experience, which meant he 'failed altogether to understand the character of modern armaments', and therefore possessed 'no real understanding of the defence problem'. Neville Chamberlain, who had succeeded Baldwin in both positions until replaced by Churchill in 1940, received similar criticism for his failure to question the Chiefs of Staff in their belief that Britain was not ready for war in 1938, which Macmillan attributed to Chamberlain and those around him lacking 'the knowledge or experience to undertake this task, even if they had had the will'; Macmillan, *Winds of Change*, p. 514 and p. 574.
[298] 5 February, 1945; Brooke, *War Diaries*, p. 657; on 12 January, 1945, he had said that Alexander 'relies on Macmillan as his confidential advisor on all matters including military ones'; on 9 February he told Alexander 'I had grave doubts as to who was Supreme Commander, he or Macmillan!'; and on 12 March he wrote 'I am afraid that Alexander, being now entirely in Macmillan's clutches, has forgotten the main object of this war'; *Ibid.*, p. 645, p. 661, and p. 672.
[299] 30 May, 1952; Catterall, *Macmillan Diaries: 1950-1957*, p. 163.

> I fear that the public will be rather alarmed to discover that we really cannot fight any war *except* a nuclear war. It is quite impossible to arm our forces with *two* sorts of weapons - conventional and unconventional... This means that if the Russians attacked (which is *very* unlikely) with conventional weapons only, in the first instance, we should be forced into the position of *starting* the nuclear war... From a purely military point of view, there is no way out. We should be utterly crushed in a conventional war.[300]

Following a brief period at the Ministry of Defence, and an equally brief period as Foreign Secretary, Macmillan had served as Chancellor of the Exchequer since December 1955. It was in the Treasury that he had really come to appreciate the need for spending reductions. This was particularly the case where the Air Force was concerned, and in July 1956, he wrote: 'The RAF seem unwilling to make any great changes. I still want to abolish Fighter Command (as such) on the grounds that UK cannot be defended even from Bombers. When the Russians have guided missiles, it cannot be defended at all'.[301]

In spite of these sentiments corresponding with Sandys' previous policy preferences, Macmillan had initially wanted Head to continue as Minister of Defence and oversee the review; but Head was an Army man, a graduate of the Royal Military Academy Sandhurst and a former Brigadier, and, as he told Macmillan's official biographer:

> I couldn't do it, that it would be a betrayal of the forces… so I had to resign. Perhaps it was just a neat way of getting rid of me, knowing that I couldn't accept the cuts… I thought the forces would be pleased that I stood up for them, but they weren't; they got Sandys instead, whom they couldn't bear![302]

Macmillan realised he needed somebody willing to confront entrenched opposition, and within weeks of appointing Sandys he was able to write in his diary that 'Duncan

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[300] 25 November, 1954; *Ibid.*, p. 367; on 1 March, 1955, he criticised Labour politicians who thought Britain should never use nuclear weapons first, writing 'with the overwhelming Russian superiority in conventional weapons, [this] is absurd'; *Ibid.*, p. 398.
[301] 19 July; *Ibid.*, p. 575.
[302] Horne, A., *Macmillan, 1957-1986: Volume II of the Official Biography* (London: Macmillan, 1989), pp. 47-48.

Sandys is both able and obstinate - great qualities'.[303] When Macmillan had been Minister of Defence he had been superior in standing to the other ministries with a say in defence policy, but unable to dictate to them, so he appreciated that the existing system of defence policy-making made genuine reform difficult.[304] To resolve this, he issued a directive on 18 January giving the Ministry of Defence sweeping new powers. Under these new rules, the Minister of Defence made the final decision, subject to Cabinet approval, on 'all questions on the size, shape, organisation and disposition of the forces, as well as their equipment and supply, their pay and conditions of service'. On top this, all complaints from Service Ministers and the Ministry of Supply had to go through the Ministry of Defence, rather than attempt to appeal directly to the Prime Minister (as the Navy had done during the Radical Review), the Defence Committee, or the Cabinet; and the Minister of Defence also gained the power to call upon the Chiefs of Staff and subordinate ministers whenever he wished. The Chairman of the Chiefs of Staff Committee, Dickson, was also made Chief of Staff to the Minister.[305]

Macmillan might have been re-ordering his government, but the policy-making process had continued along the lines originally set out by Eden, and on 11 January the Joint Planning Staff issued their examination of what the Service Ministries had thus far proposed. Whilst each department had worked in relative isolation in defence of their own interests, the Joint Planning Staff was able to make the implications of their plans clear. The report touched on familiar issues of prestige relating to colonial matters and NATO deployments, but it did manage to address some of the new realities Britain faced. For example, it was suggested that 'reduced fighter forces' would rule out the defence of Britain 'as a whole', forcing the government to choose whether to protect bomber bases or defend 'certain centres of population and industry'. Similarly, the 'world-wide' value of the Navy would reckoned to be put at risk by an insistence on maintaining balanced forces in home waters and in the Mediterranean. On the other hand, the report struck a cautious note by accusing the Air Force of being 'coloured by their assessment of the overriding need to continue to produce a significant British contribution to the nuclear deterrent', the burden of which was said to have necessitated

[303] 25 February, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 10.
[304] Macmillan also had to contend with Churchill interfering, complaining that 'I have no power; yet I am responsible for everything - esp[ecially] if it goes wrong. The P.M. is always busy about defence affairs'; 29 October, 1954; Catterall, *The Macmillan Diaries: 1950-1957*, p. 363.
[305] 'Responsibilities of the Minister of Defence: Note by the Prime Minister, 18 January, 1957'; CAB 131/18 D. (57) 2; Macmillan received a letter from Bernard Montgomery calling his decision 'admirable', adding 'Duncan Sandys now has the power given him by you, to give orders; and, being the man he is, he will see his orders are carried out'; Macmillan, *Riding the Storm*, p. 245.

reductions in overseas deployments, which had therefore become dependent on their being reinforced 'quickly by air or by aircraft carrier' in times of crisis.[306] The Chiefs of Staff decided to develop this report into a formal memorandum for Sandys' benefit.[307]

The Joint Planning Staff presented the Chiefs of Staff with an updated and more detailed version of their report on 24 January, and it began favourably in relation to what Sandys would eventually advocate. It was suggested that there was 'no effective defence' against nuclear bombardment, and that any element of counter-threat 'should not be left solely in the hands of the United States'. In addition to this, the Joint Planning Staff made efforts to 'stress that NATO and the deterrent are complimentary', since it was believed that NATO kept the United States interested in Western Europe. To this end the defence of Britain was said to depend upon 'the Allied Strategic Bomber Force and on the continued cohesion of NATO'. Whilst the Joint Planning Staff made clear their belief that Britain should seek to possess its own nuclear capability, as not to leave the 'ultimate defence' of Britain and British interests to American goodwill, this appeal towards maintaining a strong British presence in NATO was potentially open-ended enough to be utilised by all three services in defence of their different interests.[308] This would explain why, when asked for their immediate reactions to the report, the Army and Navy were most keen to emphasise this aspect, with Mountbatten taking particular objection to what he thought was an implication that Britain should only contribute the bare minimum to ensure continued NATO cohesion.[309] There was comparatively little discussion about new deployments in the report, which meant there was little to object to specifically beyond Boyle warning that reductions to Fighter Command constituted a 'serious, calculated risk'.[310] The overarching disagreement came from the Joint Planning Staff adhering to Head's 21 December 1956 directive that the Service Ministers plan on the basis of capping manpower at roughly 450,000. They had cautiously said that this would be just enough to support a 'sound strategy' in defence of British interests, but the Chiefs of Staff wished to distance themselves from a figure that they considered inadequate.[311]

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[306] 'Long Term Defence Policy: Report by the Joint Planning Staff, 11 January, 1957'; DEFE 6/40, J.P. (57) 4 (Final).
[307] DEFE 4/94, C.O.S. (57) 6th Meeting: 15 January, 1957.
[308] 'Long Term Defence Policy: Report by the Joint Planning Staff, 24 January, 1957'; DEFE 4/94, J.P. (57) 8 (Final).
[309] Templer felt that the report failed to 'sufficiently stress' the importance of NATO; DEFE 4/94, C.O.S. (57) 8th Meeting: 29 January, 1957.
[310] DEFE 4/94, C.O.S. (57) 8th Meeting: 29 January, 1957.
[311] DEFE 4/94, J.P. (57) 8 (Final); DEFE 4/94, C.O.S. (57) 8th Meeting: 29 January, 1957.

The Chiefs of Staff presented their own report on 5 February, warning Ministers that 'there are no military or strategic grounds which justify considerable reductions', and making it clear that it was only 'in H.M. Government's view' that the economic situation served to justify 'the risks involved'.[312] To make their report work as a mechanical exercise, whilst also making their opposition clear, the Chiefs of Staff stressed that their recommendations represented the absolute minimum required for the defence of British interest 'On military grounds' only. So whilst the report contained developments on what the Joint Planning Staff had put forward in relation to each service - the Air Force, for example, was still expected to provide sufficient air defence coverage to 'convince the Russians that they could not destroy a worthwhile proportion of the bases for the strategic offensive before the United Kingdom could retaliate' - special consideration was given to the potential political effects of what the government had in mind. These were policies that the Chiefs of Staff felt would 'involve this country in considerable risk, particularly in regard... to our alliances', and the overwhelming conclusion of the report was that the political position of the United Kingdom, both as a Great Power and as a leading member of several defensive alliances, was wholly dependent on its ability to project military power around the world. This report placed the Chiefs of Staff in direct opposition to the government once again, which led them to remind Ministers that 'It is our duty to say this'.[313]

The Drafting Process

Sandys' active participation in the policy-making process was delayed by a pre-existing commitment for the Minister of Defence to visit the United States and come to some arrangement over Thor missiles and possible relaxation of the McMahon Act. This made him the first British Minister to visit his American counterparts since Suez, and before he left Lloyd had told him not to appear either too eager to get back on their good side, or too resentful about their perceived lack of support during the Suez Crisis.[314] It is difficult to say whether he achieved this balance, but Macmillan would later applaud the 'very firm line' Sandys had taken in Washington, apparently letting them know just how 'widespread and deep' anti-American sentiment was in Britain at

[312] 'Long Term Defence Policy: Memorandum by the Chiefs of Staff, 5 February, 1957'; DEFE 5/73, C.O.S. (57) 34.
[313] *Ibid.*
[314] Navias, *Nuclear Weapons and British Strategic Planning*, pp. 192-93.

the time.[315] It was only after this that he was able to begin his reforming task, which he began by presenting what he referred to as a 'broad approach' to future defence policy to the House of Commons, and where he assured Members of Parliament that his 'first responsibility is for defence', and that he would not 'slash about indiscriminately' in pursuit of economies.[316]

The policy-making process officially began the following week when Powell informed his colleagues in the Service Ministries that Sandys intended to end conscription and reduce manpower to 380,000.[317] This was followed by a special weekend gathering at Chequers where Sandys sought Cabinet approval for his outline of future defence plans.[318] His 'starting point' had been the 'Government's declared intention to end National Service as soon as practicable', and in order to accomplish this drastic shift in defence policy he once again drew heavily on his previous policy preferences, offering a vision of British defence policy where 'the minimum forces necessary' were allocated towards defending British interests overseas, and priority was given to 'play[ing] our part in preventing world war'. This latter aspect was to be accomplished 'by creating a British element of nuclear deterrent power', and by contributing only 'sufficient' air, land, and sea forces to maintain the solidarity of NATO 'upon which our whole security depends'. Sandys admitted that defending British interests with 380,000 regulars would have involved an element of 'difficulty', but thought it would be possible provided these 'much reduced forces' were equipped with modern armaments. However, he was also forced to admit that reductions on this scale would 'appreciably affect' British power projection capabilities, which would in turn 'inevitably reduce our influence' in alliance decision-making and more general world affairs.[319]

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[315] Macmillan, *Riding the Storm*, pp. 241-42; Horne writes that Sandys 'had brought this forcibly home to Dulles, with his characteristically plain speaking'; Horne, *Macmillan: Volume II*, p. 21; Sandys' archive contains a transcript of his meeting with Eisenhower that includes their discussions about Thor and the Suez Canal, but there is little to suggest that Sandys took an especially firm line; 'Record of a Meeting between President Eisenhower, the Minister of Defence and H. M. Ambassador at the White House at 11:30 A.M. on February 1, 1957'; DSND 6/29.

[316] Sandys' speech was part of the debate on an Opposition motion that criticised the 'wasteful and ineffective character of the present defence arrangements'; Hansard HC vol 564 col 1283-1307 (13 February, 1957).

[317] Extract from minutes of Permanent Secretaries meeting: 20 February, 1957; AIR 19/856.

[318] 'The great "defence" week-end'; 23 and 24 February: Catterall, *The Macmillan Diaries: 1957-66*, pp. 9-10.

[319] 'Review of Defence Plans: Note by the Minister of Defence, 22 February, 1957'; AIR 2/14712; Navias writes that Powell said the Service Ministers and Chiefs of Staff did not receive this note until after the meeting at Chequers, and possibly even after the 27 February Defence Committee meeting; Navias, *Nuclear Weapons and British Strategic Planning*, p. 150.

To demonstrate how he intended to make all of this work, Sandys had provided those present with what he called a 'tentative plan' for a new distribution of force. This once again reflected his Radical Review recommendations by including in its projections a 'considerably reduced fleet' and a large amount of colonial withdrawal after which 'only local forces' would remain in several garrisons. Given that his plans were dependent on nuclear striking power, the Air Force was given more attention. He was content that the force of medium bombers, the precise number of which was still to be decided, would form the backbone of the British deterrent for the foreseeable future, but added a note of inevitability by saying that this was only until they could be replaced 'in due course' by ballistic rockets. British-built nuclear weapons were also listed as a definite requirement, although Sandys was happy to accept warheads under United States control until a worthwhile stockpile of British devices had been established. As part of this overall deterrent package Fighter Command was condemned to have its overall strength reduced from 480 to 280 planes, which were also to be replaced 'in due course' by unmanned weapons, once its focus was redirected towards the 'limited task of protecting our bomber bases only'.[320]

This was all very much in line with his 1953 recommendations, and this 'new' approach to defence was confirmed as a suitable basis for British defence policy at a 27 February Defence Committee meeting. Macmillan gave Sandys his full blessing, believing that even the most severe reductions in manpower 'would be offset by equipping the forces with nuclear weapons'. Equally in tune with Sandys' ideas, Macmillan stressed that a 'capacity to make both atomic and hydrogen weapons and the means of delivering them' would also need to be developed if Britain was to remain a nuclear power. Continuing membership of the nuclear club was a key issue for Macmillan, and he added that it was important for Britain to 'have within our control sufficient weapons to provide a deterrent influence independent of the United States', even though he was prepared to admit that he could not conceive of a scenario in which Britain would have used tactical or strategic nuclear weapons unilaterally. It would have seemed at this moment that Sandys had proven the perfect choice for what Macmillan had in store for British defence policy, but a possible point of divergence emerged at this early stage when Macmillan spoke about the means of delivering British nuclear

[320] Malta, Gibraltar, Hong Kong, Bermuda, and 'the Caribbean' were to be left to those local forces; 'Review of Defence Plans: Note by the Minister of Defence, 22 February, 1957'; AIR 2/14712.

weapons. He had definitely factored the implications of unmanned weapons development into his thinking, but he did not consider a British-built missile to be a priority. With Washington willing to offer Thor missiles to Britain under partial United States control, Macmillan felt that there was no real need 'to produce ourselves a medium-range ballistic rocket'. It was immediate pointed out by somebody present that a failure to manufacture a British missile would put the Western deterrent entirely in American hands.[321] It is not clear from the Cabinet papers who raised this objection, but it was apparently someone who felt that manned bomber aircraft were more than likely to be superseded by unmanned weaponry, and that any supposedly independent British deterrent had to be under the sole control of the British government, so quite possibly Sandys himself.

Having received the approval of both the Cabinet and the Defence Committee, Sandys could now begin to work his plans into a detailed framework to be presented to the Chiefs of Staff and Service Ministers. It was originally hoped that the policy-making process would be over reasonably quickly, with Macmillan looking to approve a final draft by 19 March before he set off for Bermuda, where he hoped to properly repair Anglo-American relations with his wartime friend Eisenhower. However, there was still no sign of a draft a week into March, which an internal Admiralty note claimed was due to Sandys 'taking a very great interest in every line'.[322] Powell recalled that the White Paper went through 26 printed proofs 'and an equal number of typed ones' before its eventual publication on 4 April. Many of these do not appear to have survived in either the official departmental files or in Sandys' personal archive; but by analysing what does survive (Sandys' public statements before and after the White Paper had been written, as well as the surviving documents including the first rough draft, the proofs that went before the Cabinet, and the finished product) Sandys' policy preferences can be shown to have been an identifiable constant throughout.

The first working draft emerged on 12 March, with the Ministry of Defence requesting feedback within two days in order for a more polished draft to be ready for 18 March, the final Cabinet meeting before Macmillan departed for Bermuda. This initial draft bore little resemblance to the finished article, but Sandys' policy preferences were clearly apparent in this still very brief outline of defence policy. It is impossible to

[321] CAB 131/18, D. (57) 2nd Meeting: 27 February, 1957.
[322] 'Internal note: 7 March, 1957; ADM 205/114'; 'Defence Turning Point', p. 31.

say whether Sandys had deliberately used this draft to make sweeping points in order to establish his negotiating position, or whether it simply represented his thoughts in their most natural form, befitting of his newly-increased importance in the policy-making process. But the sections relating to the main pillars of Sandys' belief system - that the opening phase ought to be given priority, and that unmanned weaponry would eventually dominate strategic calculations - remained intellectually consistent across the numerous drafts produced despite opposition from the Chiefs of Staff and Service Ministers forcing minor textual alterations.

New Strategic Priorities

When Sandys spoke in the House of Commons on 13 February, he claimed that his position was dictated by the 'realities of today'. First and foremost amongst these realities in Sandys' opinion was the present situation where the power of attack had established its dominance over the ability of a nation to defend itself. To hammer this point home, Sandys informed the House of Commons that the type of bombs dropped on Japan in 1945 were now 'primarily suitable for tactical use by troops in the field'.[323] Therefore, having taken into account the 'present superiority of the means of attack over the means of defence', as well as the 'catastrophic consequences' of thermonuclear war, Sandys had come to the conclusion that the only sensible policy for Britain was to 'concentrate our military effort upon prevention rather than defence'.[324] By making this the central point of his defence review, Sandys was returning to his initially well-received 1953 suggestion that defence expenditure be concentrated 'on those objects which will give the highest return in terms of effective defence'. Although this had been embraced by the government at the time as a suitable foundation for future policy, it soon became lost to inter-service rivalries and frustrated economies. Now Sandys and the newly-strengthened Ministry of Defence, with control over 'all questions on the size, shape, organisation and disposition of the forces', had greater prospects of making this a reality.

To Sandys, prevention still meant maintaining an effective level of striking power, and he gave credit to the 'brilliant scientific research' instigated by the Labour government that had equipped Britain with its atomic weapons before revealing that 'the

[323] Hansard HC vol 564 cols 1306-7 (13 February, 1957).
[324] *Ibid.*

first British megaton bomb' was almost complete, and speaking about how he expected the Macmillan government to embrace its possibilities.[325] In addition to this, he explained how 'the possession of nuclear air power is not necessarily by itself a fully effective deterrent', paying tribute to the role of NATO, SEATO (South East Asia Treaty Organisation) and the Baghdad Pact as vital components of the overall deterrent force, albeit whilst pointing out that Britain could no longer contribute 'more than our fair share' towards their requirements.[326] Having done this, he offered a summation of his overall strategic concept that simply reiterated his 1953 policy preferences:

> When we have settled what contribution Britain should make to the deterrent, we have to ask ourselves whether we should, in addition, provide other forces which do not directly contribute to the deterrent but which would be desirable for waging major war should the deterrent fail.
>
> We must, as far as possible, resist the temptation to dissipate our limited resources on forces which in themselves have no deterrent value; for to that extent we should be reducing the contribution we can make to the prevention of war.[327]

In stating that the deterrent could 'fail', Sandys was once again disputing the strategic priorities of the Chiefs of Staff, as he had in 1953, when he had shunned the idea of separating deterrence as a means of winning the Cold War from making preparations to utilise nuclear force in winning a 'hot war'. Just like in 1953, the nature of these priorities immediately asked questions of the Navy, the future of which Sandys said 'depends upon our view of the likely course of a full-scale nuclear war'. In deciding the likely course of a 'full-scale nuclear war', Sandys said that policy-makers would have to answer the following questions.

> How soon after the outbreak of such a war do we think we might expect that shipping across the Atlantic could be resumed? After the initial nuclear attack, would the harbours of Britain and Western Europe still be usable? Have we to assume that when the first all-out atomic phase was over, there

[325] Hansard HC vol 564 cols 1308-9 (13 February, 1957).
[326] Hansard HC vol 564 cols 1309-10 (13 February, 1957).
[327] Hansard HC vol 564 cols 1310-11 (13 February, 1957).

> would follow a second phase - sometimes described as broken-back war - in which operations at sea would play a prominent part?[328]

He had claimed in 1953 that everything 'form[ed] part of a single task', which he had referred to as winning the Cold War through 'actual preparations for war'; that is to say, mobilising the greatest amount of potential striking power, which meant equipping Britain with an effective nuclear delivery system. The most recent Chiefs of Staff report of 5 February had not offered any recommendations relating to strategic priorities as *Defence Policy and Global Strategy* had, but the principles originally laid down in 1952 had been reaffirmed by Monckton the previous February.[329]

Sandys had brought 'broken-backed' warfare into question and effectively dismissed its value within the space of a few lines, and his policy preferences were developed in his first draft White Paper which formalised his 1953 strategic conception by reducing the functions of the Armed Forces to 'two principal roles'. The first was 'to play their part with the forces of allied forces in preventing world war and in resisting Communist aggression and infiltration', and the second was 'to defend, and preserve order in, British colonies and protected territories'. The first role was naturally listed as 'the more exacting of these tasks', but due to the fact it was expected to be played out as part of different systems of alliance, Sandys said that Britain did not necessarily require 'forces which are self-sufficient and balanced in all respects'.[330] Taken into consideration alongside what had already been written about Sandys' policy preferences, and the near-identical phrasing incorporated in his 1953 memorandums, the implications of this point are clear, and Sandys made no reference to 'broken-backed' warfare as one of the key roles of the Armed Forces.[331] It is alluded to later in the draft, but in terms reminiscent of his 1953 memorandums, with the role of naval forces in any global war described as

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[328] Hansard HC vol 564 cols 1314 (13 February, 1957).

[329] 'If their first task is to prevent global war and their second is to play their proper part in the cold war, their third is to be capable of dealing with limited and local conflicts wherever they may break out. Fourthly, and it has to come fourth, they must play their part effectively if, in spite of all our efforts, global war should break out'; Hansard HC vol 549 cols 1019-20 (28 February, 1956).

[330] 'Defence White Paper: Draft B, 13 March, 1957'; ADM 205/114.

[331] In June 1953, Sandys had written that being part of a Western alliance 'does not imply that we must necessarily provide a balanced force of all arms... On the contrary, we could probably make a more significant and more spectacular contribution to Western power by concentrating our effort upon those aspects of defence for which we are particularly well qualified'; 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1; in November this became the more strongly-worded 'We simply cannot afford, for the sake of prestige and sentiment, to expend our limited resources upon providing a needlessly large number of carriers and cruisers which will merely duplicate American forces'; 'Defence Policy and Expenditure: 20 November, 1953'; DSND 4/1/1.

'uncertain' following the bombardment of Britain by 'aircraft or rockets'. This was expected to have destroyed most of Britain's ability to wage war effectively 'within a few days'. Britain 'keeping open her Atlantic life-line' was listed as a possible consideration, but Sandys suggested that this was a matter best resolved within NATO planning structures.[332] If Sandys' previous recommendations are anything to go by, this would have meant shifting that particular burden onto American vessels.

The immediate feedback was almost wholly sceptical. Surprisingly, the Admiralty accepted the role Sandys had in mind for the Navy, although they said it would prove difficult to fulfil following the sort of reductions in manpower and spending he had put forward. With little for the Admiralty to complain about militarily, criticism was focussed on similar political lines as had been highlighted by the Chiefs of Staff. The First Lord warned Sandys that were he to make an announcement that Britain intended to eventually cut its Armed Forces by half, he would 'cause the disintegration of the North Atlantic Alliance'. This would have the practical effect of de-railing the entire White Paper, since the draft had described NATO as a vital component of the deterrent, as well as expecting the alliance system to make up for any lack of balance in British strength. The draft was consequently 'too defensive' for the Admiralty, and they said that they would find it hard to support the idea that 'military and scientific developments justified these enormous reductions'.[333] The Air Ministry, which at this point stood to emerge from the Sandys review relatively unscathed, echoed much of what the Admiralty had said. They too stressed the political implications of the draft, writing that Britain would cease to be a 'leading power' following reductions that were 'startling in all aspects'. 'Default on N.A.T.O.' would inevitably follow such proposals, and the spectre of European military leadership falling into German hands was raised for added effect. They even predicted that Sandys' proposals would fail in their declared aim of improving the economic outlook, as their failure to 'convince militarily' would 'be judged as a panic measure forced on H.M.G. by [a] serious and deteriorating economic

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[332] *Ibid.*

[333] Selkirk to Sandys: undated, but most likely 14 March, 1957; ADM 205/114; George Douglas-Hamilton, better known as the Earl of Selkirk, was the First Lord of the Admiralty at this point. Grove writes that Selkirk was a 'self-effacing' character, sent to the Admiralty by Macmillan to make Sandys' task easier. Despite this, Selkirk thought it was beyond Sandys' remit to drastically alter the shape of the Armed Forces before it was decided exactly what Britain was attempting to defend; Grove, *Vanguard to Trident*, p. 201.

outlook'. This would in turn defeat the entire object of the defence review by reducing confidence in the British economy, thereby serving to undermine it.[334]

When the Chiefs of Staff met to consider their reaction to the first draft, the Air Force and the Army wished to distance themselves from Sandys' manpower targets, with the Vice Chief of the Imperial General Staff, William Oliver, voicing his opinion that Sandys had offered them something 'based entirely on economic considerations and not related to military capability'. Mountbatten was equally worried, repeating what had previously been suggested about the end of NATO, and adding that Sandys' ideas becoming a reality would provide 'immense encouragement to the forces of Communism and to those of Arab nationalism', effectively undermining everything Britain stood for abroad.[335] The meeting agreed to send their reservations directly to Sandys, the result of which was a 15 March minute explaining that the Chiefs of Staff were 'profoundly concerned at some of the effects which the White Paper in its present form may have'. This covered service morale, concerns that 'our Allies will be gravely disturbed', and what appeared to be a lack of clarity relating to the strategic priorities Sandys had put forward.[336]

The feedback Sandys had asked for was intended to inform the first formal draft, the third proof, which was to be taken before the Cabinet for general approval having been circulated on 15 March. Sandys took little of this criticism on board, submitting a document that was largely the same as his working draft.[337] The 'broad lines' of this latest draft were approved by the Cabinet on 18 March, although it was noted that its presentation 'would need careful consideration'. Macmillan was concerned that emphasising the root-and-branch nature of the review might alarm British allies, and that it would also have domestic implications by 'reflect[ing] unfavourably on the record of Conservative Governments since 1952'. To this end he requested that the opening statement stress a degree of continuity by pointing out that 'the objective of our defence policy remained, as it always had been, the maintenance of compact and efficient fighting Services, but that the methods by which we should best attain this objective required radical reappraisal in the light of current strategic considerations'.[338] In addition

[334] 'Air Ministry criticisms, again undated, but also most likely 14 March, 1957'; AIR 19/849.
[335] 'Extract of C.O.S. (57) 21st Meeting: 14 March, 1957'; ADM 205/114.
[336] 'Minute from the Chiefs of Staff to the Minister of Defence: 15 March, 1957'; ADM 205/114.
[337] 'Defence: Outline of Future Policy - 3rd Proof, 15 March, 1957'; CAB 129/85, C. (57) 69.
[338] CAB 128/31, CC. (57) 17: 18 March, 1957.

to this, it was requested that Sandys' emphasise that any reduction in manpower would be 'counter-balanced by an increase in atomic strength', and Macmillan proposed a thorough re-write of sections which he thought 'may give the impression that the Navy is being handled with special severity'.[339]

In discussing what Sandys had put forward, members of the Cabinet suggested that this 'fundamental revolution' in defence policy 'might have far-reaching effects on our influence in world affairs'; that it would lessen Britain's ability to maintain their position in far-flung interests such as Hong Kong; that it would have an 'unfortunate' effect on NATO; and that 'any suggestion that the proposed reduction in our naval forces would warrant the transfer of certain NATO naval Commands to other countries' should be cleared up.[340] The Admiralty was less critical about the third proof, since they had already accepted much of what Sandys' intended in terms of strategy, and their recommendations were limited to requesting that the 'Western Alliance' be referred to as a definite part of the overall deterrent, accompanied by a token complaint about manpower reductions.[341] These criticisms were considered by Sandys, as were the more specific points raised by the Service Ministries, and Sandys own copy of the third proof contained in his archives has numerous alterations hinting at a certain amount of compromise.[342] However, where Sandys made alterations in an attempt to move towards a greater level of consensus, other sections of his personal third proof were changed to restore balance, suggesting that Sandys was conscious of a need to keep the fundamentals of his policy preferences intact at this early stage.

The Chiefs of Staff were still far from happy with the direction of Sandys' proposals, so Dickson was sent to explain Sandys' views by claiming that the Ministry of Defence was 'anxious to reach an understanding' with the Chiefs of Staff. Dickson informed his colleagues that he had explained their constitutional role to Sandys, and their motivations for criticising his recommendations, before informing them how and why Sandys disagreed with their advice. Sandys was said to have divided British defence requirements into two parts. The first addressed the defence of 'purely British interests', and the second related to the contribution Britain was expected to make towards its

[339] 'Defence White Paper: Amendments suggested in Cabinet discussions or noted in Prime Minister's copy of the draft'; DEFE 7/983
[340] CAB 128/31, CC. (57) 17: 18 March, 1957.
[341] Selkirk to Sandys: 22 March, 1957; AIR 19/849.
[342] Sandys' personally edited copy of 'Defence: Outline of Future Policy - 3rd Proof' in DSND 6/52.

defensive alliances; all of which Sandys was convinced could be accomplished with 380,000 regulars. Dickson said he had not pressed the issue with Sandys, but advised the Chiefs of Staff to prepare for him asking them why this would not be possible.[343] The nature of this message was captured in an Admiralty briefing for Mountbatten which said 'The Minister's tactics appear to be much as predicted', and questioned 'whether it is wise to accept battle on ground of the Minister's own choosing'.[344]

Dickson met with the Chiefs of Staff again the following day to inform them that Sandys wished to meet them and explain things himself, suggesting that they come up with some way of splitting the difference between their respective manpower requirements. Mountbatten could see no way of compromising on this. He said he would be willing to work with the Ministry of Defence to make an Armed Forces of 380,000 work, as this was his constitutional role, but insisted that there was 'no implication that a reduction to this figure had been justified on military grounds by the Chiefs of Staff'. Ronald Ivelaw-Chapman, the Vice Chief of the Air Staff, agreed with Mountbatten. He was worried that if the White Paper included any references to what 'the Government' believed, this would imply that the Chiefs of Staff were in agreement with Sandys. Templer also supported this, as well as questioning the 'soundness' of Sandys' strategic priorities.[345]

Before the Chiefs of Staff had the opportunity to put their points to Sandys directly, another draft was circulated. This fifth proof had included the justification of previous Conservative programmes Macmillan had asked for, but other points which Sandys had been pulled up on had not changed at all in substance. Some of them had even been worded to present an even firmer picture of Sandys' policy preferences. There was evidence that Sandys had accepted some criticism as the fifth proof now laid down 'three main tasks' for the Armed Forces. To 'play their part with the forces of Allied countries in deterring and resisting aggression' was still at the top of the running order, and this was still followed by a commitment to defend British interests from localised attack. The third task of the Armed Forces was then listed as taking part 'in limited

[343] Dickson to Chiefs of Staff Committee: 21 March, 1957; ADM 205/114; the Chiefs of Staff had reiterated their need for at least 450000 regulars a month previously in 'Long Term Defence Policy: Memorandum by the Chiefs of Staff, 22 February, 1957'; DEFE 5/74, C.O.S. (57) 47.
[344] 'Long Term Defence Review: 21 March, 1957'; AIR 8/2157.
[345] DEFE 4/96, C.O.S. (57) 23rd Meeting: 22 March, 1957.

operations to uphold the rule of law'.[346] This reads like a concession to the points raised in Cabinet about civil defence, the inclusion of which meant no deviation from the wider philosophy Sandys' wished to implement. That said, its inclusion could still have been useful as an inconsequential gesture designed to imply that Sandys' was capable of looking beyond the potentially decisive opening phase, even if he did not envision a need to keep supply lines to the United States open following such an event.

The day after the fifth proof had made its way around Whitehall, Sandys met the Chiefs of Staff to clear up what he called their 'understandable misgivings'. He explained to them that in his view the reduced Armed Forces would still be sufficient to defend British colonies, 'take part in limited overseas operations... in support of the Baghdad and SEATO alliances', and to make a 'fair contribution' to NATO. Britain, he said, was currently contributing more than its fair share to NATO, and it was time that other member states took on some of the burdens that Britain had carried since the alliance was formed. What made Sandys confident that Britain could do was his belief that increasing or decreasing British commitments to NATO would not be the 'determining factor' in whether the Soviet Union started a global war or not.[347] Sandys then gave the Chiefs of Staff further insight into his strategic concept:

> Although he realised that from the purely military aspect NATO forces would not be regarded as enough for safety, in his own view they were sufficient to deter Soviet Russia from starting a nuclear war since she could attain her ends in other ways at much less risk to herself, e.g. by subversion in the Middle East and South East Asia. However, a greater probable danger was the potential commercial threat from Russia since, with her form of Government she could easily undertake a trade war.[348]

Navias has described Sandys' ideas here as 'somewhat confused', writing that he 'appeared to equate Soviet goals in the Middle East and the Far East with those in Europe', as well as blurring the 'careful distinctions between cold, limited and global war' that the Chiefs of Staff had always based their recommendations upon. This he cites as proof that 'what undoubtedly drove Sandys was not so much an explicit strategic

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[346] *Ibid.*
[347] 'Extract of C.O.S. (S) (57) 5th Meeting: 27 March, 1957'; ADM 205/114.
[348] *Ibid.*

formula as much as the issue of financial savings', which was also reflected in his concerns about the Soviet Union resorting to economic warfare.[349]

It is difficult to say how well Sandys was able to put his case across to the Chiefs of Staff, or whether he was even willing to engage with them properly; but this is an almost perfect summation of the criticism his ideas had attracted during the Radical Review. He had previously advocated confronting the Chinese over Hong Kong with the threat of general war, and this would appear to have also become his preferred policy for resisting the Soviet Union's attempts to expand beyond its borders. This explains his supposed inability to correctly understand the strategic priorities the Chiefs of Staff had decided upon. Sandys believed that what kept the Soviet Union within its borders was not localised blocking manoeuvres, but the threat of full-blown nuclear war. Whether these policies were sensible is not the concern of this thesis, but they can clearly be shown to have been carried over to the Ministry of Defence from Sandys' time at the Ministry of Supply. This is representative of 'an explicit strategic formula', regardless of whether it was misguided or not. There can be no doubt that Sandys had to make difficult decisions regarding the cost and shape of the Armed Forces, as he had during the Radical Review when he was willing to make more drastic cuts in spending than even the Treasury deemed suitable; but it must be recognised that Sandys had arrived at the Ministry of Defence with something approaching a coherent strategic vision suitable for a cost-conscious second class power, and that he was consistent in his adherence to it.[350]

In a concession to the Chiefs of Staff, Sandys offered to re-write the section explaining how the government thought their ends could be achieved with smaller forces, but they were still concerned that referring to 'the Government' would implicate them in supporting any reductions on strategic grounds. Sandys claimed he had no

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[349] Navias writes that 'it was evident from the outset that this [meeting] was not a search for compromise on his (Sandys') part but a reaction to the criticisms that he had been ignoring the Chiefs... For him, the problem was one of wording and presentation, not strategic rationales'; Navias, *Nuclear Weapons and British Strategic Planning*, pp. 153-54; Baylis agrees with this interpretation, writing that 'Sandys had a single-minded determination to reduce manpower costs but he does not appear to have linked this requirement to the strategic need to put greater emphasis on nuclear deterrence in defence planning... Although the White Paper, therefore, seemed to indicate a clearly thought-out shift of strategic priorities; a good case can be made that, in practice, economic and political calculations were more important criteria for the Defence Secretary'; Baylis, *Ambiguity and Deterrence*, pp. 249-50.

[350] It is also worth recalling his July 1950 speech that said 'we should be lacking in our duty as a nation if we did not put defence before the restoration of prosperity... what is at stake is our very lives and the freedom we fought for in the last war'; 'Duncan Sandys Gives Grim Warning'; *Streatham News*: 21 July, 1950 in DSND 13/16/1.

intention of this being the case, and the meeting agreed that the White Paper 'should make it clear that the reductions in the forces were not based on any strategic advice given by the Chiefs of Staff'. Following this, a number of amendments were decided upon, the most important being that the possession of 'nuclear air power' should be referred to as 'not by itself a complete deterrent', as opposed to Sandys' original wording of 'not by itself a wholly reliable deterrent'. The original wording was more in line with his belief that deterrence could fail, but was nevertheless something which the Air Force should handle.[351]

Before Sandys could implement these changes, the fifth proof had to go before the Cabinet. Here the objections were familiar. The Foreign Secretary wished to see the importance of NATO mentioned in the opening paragraphs 'to avoid any impression of an abrupt departure from earlier defence policy', and it was pointed out that the Chiefs of Staff had met before the Cabinet to once again raise their primary objections. They still thought Sandys' preferred personnel levels were far too low, considering the threat of communism was felt to have 'in no way diminished'. Combined with this, the reluctance of other NATO and alliance states to reinforce their own numbers meant that the 'total forces available for the defence of the free world would be reduced'. The Chiefs of Staff wanted the White Paper to make clear that the reduction to 375,000 was 'dictated primarily by economic needs', and to have it made clear that they did not endorse the reductions on military grounds.[352] Navias suggests that tensions were beginning to make themselves obvious at this point, as Macmillan said he would personally draft the relevant paragraphs himself in order to soothe the Chiefs of Staff and to frame the reductions 'by referring to our traditional reliance on regular forces, and our declared intention to revert to this practice as soon as possible'.[353]

The sixth proof was circulated on 28 March, with a cover note claiming that it contained substantial changes to numerous paragraphs, although Sandys' overall strategic concept remained untouched.[354] When the eighth proof was released on 1 April, a new introduction made reference to British policy being 'determined by her

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[351] 'Extract of C.O.S. (S) (57) 5th Meeting: 27 March, 1957'; ADM 205/114; several of the amendments are noted on Sandys' copy of 'Defence: Outline of Future Policy - 5th Proof' in DSND 6/52.
[352] CAB 128/31 CC. (57) 26: 28 March, 1957 (4:15 pm); DEFE 4/96, C.O.S. (57) 25th Meeting: 28 March, 1957.
[353] CAB 128/31 CC. (57) 26: 28 March, 1957 (4:15 pm); Navias, *Nuclear Weapons and British Strategic Planning*, p. 156.
[354] 'Defence: Outline of Future Policy - 6th Proof, 28 March, 1957'; CAB 129/85, C. (57) 80.

obligation to make her contribution to NATO and other regional alliances as to discharge her own special responsibilities in many parts of the world'. However, the eighth proof also showed that Sandys' had actually gone back on several important points to strengthen his original concept. The reference to 'limited operations to uphold the rule of law' as a key strategic priority had been removed, merged with the second point about protecting British interests, and still behind the primary task of 'deterring and resisting aggression' in partnership with allies.[355] By this point all concerned appear to have accepted that the White Paper was in its final form, and the Admiralty began briefing its officers about what to expect from it.[356] There was still time for the Chiefs of Staff to expose Sandys for planning to go back on his agreement to distance them and their strategic concerns from the finished product, the points raised in the 2 April Cabinet discussion, particularly the request to 'give rather more emphasis to the essential role of civil defence', were not going to knock Sandys off course.[357]

The Unmanned Weapons Threat

It appeared that Sandys' new strategic priorities had been accepted, but there was some last minute qualification requested as to what exactly Sandys meant when he used the term 'deterrent'. The Director of Plans at the Admiralty objected to naval power being said to 'not for the most part contribute directly to the deterrent', and the wording was subsequently agreed to say that the role of the Navy in global war 'cannot be precisely forecast'.[358] In the same vein, the Air Ministry sought to make certain that the White Paper committed Britain to maintaining a contribution to the Western deterrent that was both independent and operationally effective, with a hand-written note in the departmental files saying that possession of an independent nuclear capability was the basis of the 'whole paper'.[359]

Although a precise definition of what the British deterrent was expected to consist of was noticeably absent from Sandys' drafts, there can be little doubt as to what he

[355] 'Defence: Outline of Future Policy - 8th Proof, 1 April, 1957'; CAB 129/85, C. (57) 84.
[356] Admiralty General Message: 3 April, 1957; ADM 205/114; Macmillan noted in his diary on 2 April that the Cabinet had 'finally agreed' on the content of the White Paper, and even praised Sandys for being 'very patient'; Catterall, *The Macmillan Diaries: 1957-66*, p. 26.
[357] Navias, *Nuclear Weapons and British Strategic Planning*, pp. 156-57; CAB 128/31 CC. (57) 28: 2 April, 1957.
[358] 'Defence White Paper: Note by the Director of Plans, 1 April, 1957'; Parliamentary Secretary to Secretary to First Sea Lord: 2 April, 1957; ADM 205/114.
[359] 'Loose notes: 2 April, 1957'; AIR 19/849.

expected to form the main body of British nuclear capability. Having opened his February speech in the House of Commons with the uncontroversial point that the 'basic responsibility of any Government is to protect the lives and independence of its people', Sandys brought his attention to the 'phenomenal advances in the development of weapons of mass destruction' that had occurred since the Second World War.[360] Taking a conciliatory tone, he said that 'Members on both sides of the House will agree that we should not be serving the best interests of the country by seeking to make defence a party political issue'; although it was apparently worth reminding everybody that Labour had failed to develop a supersonic research aircraft, which Sandys described as the 'primary reason' that the United States had established a lead in military aviation. Equally unworthy of party political attention was 'the failure of the Labour Government during their six years of office to initiate any research into guided missiles of the long-range ballistic type'. The lack of effective research into unmanned weapons, Sandys said, was the main reason 'that we are now a long way behind both the Americans and the Russians in that vital work'.[361]

Returning to his recommendations of 1953, Sandys told the House of Commons that 'However efficient our defences, it is inconceivable that they could provide 100 per cent immunity against air attack'. This was because 'half a dozen nuclear bombers' could 'cause incalculable death and devastation over enormous areas' with a single raid. And this was only relevant to manned bomber aircraft. These were 'difficult enough to bring down', but threat of unmanned weaponry was altogether more serious.[362]

> After the war, the Russians took over the German rocket establishments and compelled German scientists to work for them. There is every reason to believe that the Russians have been developing a much enlarged version of the German V.2 rocket, but with the enormous difference that it would now carry a nuclear warhead. The range of these rockets is probably sufficient to reach Britain from launching points within Soviet-controlled territory. These projectiles would rise to a height of over 100 miles into the stratosphere and travel at speeds of over 5,000 miles an hour.[363]

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[360] Hansard HC vol 564 col 1303 (13 February, 1957).
[361] Hansard HC vol 564 cols 1303-5 (13 February, 1957).
[362] Hansard HC vol 564 col 1308 (13 February, 1957).
[363] *Ibid.*

Whilst entertaining the prospect that a defensive solution could eventually be found to weapons of this calibre, Sandys said it would be 'absurd' to pretend such a system would be available in the immediate future. When he brought his speech towards air defence, Sandys suggesting that savings might be found in accordance with this strategy by accepting that 'the whole of the British Isles' could not be defended, and therefore confining the role of air defence 'to that of protecting our power of retaliation, upon which the prospects of peace so largely depend'.[364] As Sandys began to expand on how this idea to reallocate fighter defences might provide a better return on its investment, Emrys Hughes, the Labour representative for South Ayrshire, asked 'What about rockets?'[365] Hughes was a pacifist, and he had been asking questions relating to the futility of defence planning against nuclear warfare for almost a decade, so Sandys moved onto this section of his speech.[366] He said that when the Soviet Union gained the ability to bombard Britain with unmanned weaponry, 'we shall have to consider whether it is worth while retaining fighter aircraft at all'; but for the time being, 'it would be irresponsible to neglect such means as are available to protect our deterrent power'.[367] Looking towards the longer term, however, he made his thoughts clear:

> [I]t is quite clear - and I agree about this - that ultimately the threat to this Island will come not from manned bombers, but from nuclear ballistic projectiles. It is similarly clear that in the future the effectiveness of our deterrent power will also depend upon the possession by us of these weapons.[368]

He said that this idea 'must greatly influence our future programme of research and production', pressing the need for longer-term planning. It needed to be determined whether Britain 'should develop more advanced types of fighters and bombers', or whether policy should be determined by looking at projects and asking whether 'by the time these more advanced types can be introduced into service, they will have been superseded by rocket weapons, both for the defensive and offensive roles'. When he said that this decision 'is largely a question of one's estimate and assessment of the timetable on both sides', he then made it plain where he stood in his next breath by saying 'In any

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[364] *Ibid.*
[365] Hansard HC vol 564 col 1312 (13 February, 1957).
[366] For early examples, see: Hansard HC vol 448 col 160 (1 March, 1948) and Hansard HC vol 448 cols 2673-77 (22 March, 1948).
[367] Hansard HC vol 564 col 1312 (13 February, 1957).
[368] *Ibid.*

case, it is evident that we must give the highest priority to the development of these new weapons and their introduction at the earliest moment'.[369]

The first draft Sandys had circulated built on this early statement by basing its argument on the need for British defence policy to be 'radically revised' due to technological development and the emergence of thermonuclear weapons. It read:

> [T]he evolution of rocket weapons has been forging ahead. It is now only a matter of a few years before there will be missiles steered by electronic brains capable of delivering megaton warheads over a range of 5,000 miles or more.
>
> These sensational scientific advances in methods of waging war have fundamentally altered the whole basis of world strategy, and make it necessary for all previous defence planning to be revised.[370]

Although this must have seemed radical, Sandys would have had good reason to believe that these predictions were sound. He had used his memorandum of November 1953 to advocate that defence policy be based on the assumption that Britain could not be defended from unmanned weapons. More specifically, he had claimed that the Soviet Union would be capable of delivering a nuclear weapon into London from East Germany by 1956, and that an even more fearsome weapon would not be far behind. In May 1956 the Soviet Union had proven Sandys correct when it deployed the R-5 series of missile. The R-5 had been in development since 1951, had entered testing in 1954, and had a range of over 700 miles. This meant they would have been capable of hitting London from sites in East Germany, and of doing so whilst carrying nuclear warheads, vindicating Sandys completely and serving to strengthen his convictions.[371] That said, the Air Ministry suggested he change the wording lest the White Paper 'give the misleading impression' that Britain could manufacture comparable weapons in a similar timeframe.[372]

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[369] *Ibid.*
[370] 'Defence White Paper: Draft B, 13 March, 1957'; ADM 205/114.
[371] Chertok, B., *Rockets and People: Volume II - Creating a Rocket Industry* (Washington: NASA History Division, 2006), p. 162, p. 188, and p. 243.
[372] 'Defence White Paper: Draft B, 13 March, 1957'; AIR 19/849.

The draft went on, explaining how these developments had made it 'most unlikely' that Britain could wage a major war without its allies, primarily the United States, and that 'full account must be taken of this important fact'. Other fundamental considerations were reducing the burden defence spending placed on the economy, and the need for a greater appreciation of long-term planning. This latter concern was primarily influenced by the need to keep pace with rapid technological development. This development in his thinking would seem to be supported by the section on the nuclear deterrent. Repeating familiar statements about how 'only a dozen' Soviet bomber aircraft 'might well blot out a large part of the population' if they were to penetrate British air defences, therefore making fighter aircraft increasingly ineffective, Sandys began the passage on why Britain had to 'prevent war rather than prepare for it' by claiming 'defence has become impossible'.

The copy of the draft that found its way into the Admiralty has this line highlighted, whilst the Air Ministry simply crossed it out of their copy.[373] However it was the Home Office that took particular objection to this, and Butler responded by telling Sandys that 'catastrophic destruction and unprecedented casualties... does not mean that defence is impossible', and suggesting that any policy of reliance on nuclear deterrence required an element of civil defence planning in order to demonstrate to the Soviet Union that Britain still possessed 'the will to resist'.[374] The Home Office had actually written to the Ministry of Defence whilst Sandys was working on his first draft after Powell asked them for their thoughts on civil defence. Their response was to submit a note that referred to civil defence preparations as an 'essential part of the policy of reliance on the deterrent', and claimed that in spite of the 'catastrophic conditions that would inevitably result from the use of thermo-nuclear weapons', adequate civil defence measures 'even in these crowded islands might be a decisive factor in the struggle'.[375]

The third proof, as it had in relation to the strategic priorities Sandys had recommended, did not make substantial alterations to any of these early statements, and continued to ignore the Home Office. The reference to defence becoming 'impossible' had been removed, but the inability of fighter aircraft to offer 'the country as a whole

[373] 'Defence White Paper: Draft B, 13 March, 1957'; ADM 205/114; 'Defence White Paper: Draft B, 13 March, 1957'; AIR 19/849.
[374] 'In any case even if it seemed to be so, why lower the morale of our people and encourage our enemies by saying so'; Butler to Sandys: 15 March, 1957; DEFE 7/983.
[375] S. C. Kirkman to Powell: 8 March, 1957; DEFE 7/983.

any effective protection' remained, as did Sandys' belief that 'the central aim of military policy must be to prevent war rather than to prepare for it'.[376] The passage on 'missiles steered by electronic brains' that 'have fundamentally altered the whole basis of world strategy' was reproduced in near identical form, with only an appeal 'for all previous defence planning to be revised' removed.[377]

The reactions from the Admiralty and the Air Ministry were mixed, but the Treasury were so alarmed that they asked Macmillan to extend the White Paper's original timetable, as well as sending Sandys a comprehensive list of proposed amendments. These mostly concerned themselves with matters of finance, for instance reminding Sandys that the Chancellor was yet to commit himself to funding a British-built missile, but it was also pointed out that the third proof provided 'nothing to enable organised society to survive'. On this the Treasury agreed with the Home Office that Sandys' preferences undermined the policy of deterrence, adding that plans to reduce the food stockpile served to demonstrate that 'the policy of survival is not the one we are pursuing'.[378] These concerns were reflected in the Cabinet, where it was said that the sections covering civil defence needed further attention, 'particularly in the light of the statement that the great cities could not at present be protected against nuclear attack'.[379]

Whilst Sandys noted some of their criticisms on his personal copy, these sections once again showed him to have made notes that bolstered his original ideas. His copy of the third proof has 'have fundamentally altered' changed to 'are fundamentally altering', which makes the statement less definitive. However, Sandys also made a note in the opening paragraph to make it clear that reform was required on 'economic, scientific and international grounds', removing any mention of 'military grounds'. This serves to imply that technological development, rather than established notions of what Britain was expected to defend, was now a more pressing influence on the policy-making process.[380] Similarly, Sandys crossed out 'fighters cannot give... any effective protection to cities against aerial attack', after the Air Ministry had asked that this be changed to 'complete protection'. Sandys' note in the margin of his copy suggests adding 'there is at

[376] 'Defence: Outline of Future Policy - 3rd Proof, 15 March, 1957'; CAB 129/85, C. (57) 69.
[377] 'Defence: Outline of Future Policy - 3rd Proof, 15 March, 1957'; CAB 129/85, C. (57) 69.
[378] E. W. Maude to Powell: 16 March, 1957; DEFE 7/983.
[379] CAB 128/31, CC. (57) 17: 18 March, 1957.
[380] 'Defence: Outline of Future Policy - 3rd Proof'; DSND 6/52.

present no means of protecting' instead.[381] Whilst this change might have reassured Fighter Command by suggesting that the next generation of fighter aircraft might have been more capable, it actually serves to doubt that even an unmanned weapons-based anti-aircraft defence system could provide comprehensive coverage. This is supported by an alteration on the next page, where 'air defence must be provided for the nuclear deterrent' is replaced by 'the country as a whole cannot be protected against nuclear attack'. That this also follows the words 'so largely' being inserted into 'peace depends upon the effectiveness of the deterrent' further confirms Sandys' intentions. If the addition of 'so largely' was meant to reduce the importance of the nuclear strike capability in relation to the rest of the Armed Forces, making it clear that air defence would concentrate around bomber bases and rocket sites restored its privileged status.[382]

Technological development was further promoted to a primary consideration in the fifth proof, which went into the actual policy sections by stating there was now a 'necessity to re-examine defence policy on economic grounds [that] coincides with the need to do so on scientific grounds'. The references to 'missiles steered by electronic brains' was gone, but this was made up for with an expanded passage on what technological development meant for British defence policy:

> It has been clear for some time that these sensational scientific advances must fundamentally alter the whole basis of military planning. However, it is only now that the future picture is becoming sufficiently clear to enable a comprehensive reshaping of policy to be undertaken with any degree of confidence.[383]

The less definitive 'are fundamentally altering' had not been used, and the fifth proof's re-written passage on the nuclear deterrent is a perfect example of Sandys working the criticism he had received into the revised text whilst at the same time changing other parts of the wording to strengthen his original point. This section had incorporated his colleagues' preference for any statements regarding the lack of effective defence to relate to the 'present', but it did so in the following way: 'It must be frankly recognised

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[381] George Ward, the Secretary of State for Air, also suggested that 'fundamentally altered' be changed to 'progressively altering', which Sandys rejected; Ward to Sandys: 18 March, 1957; ADM 205/114; 'Defence: Outline of Future Policy - 3rd Proof'; DSND 6/52.
[382] 'Defence: Outline of Future Policy - 3rd Proof'; DSND 6/52.
[383] 'Defence: Outline of Future Policy - 5th Proof, 26 March, 1957'; CAB 129/85, C. (57) 79.

that there is at present no means of protecting the people of Britain against the catastrophic consequences of an attack with nuclear weapons'. This, along with the reproduced line about a mere dozen manned aircraft being able to 'blot out' most of the people in major cities, was referred to as a 'grim fact' in order to retain the definitive nature of his original draft. The idea of a defensive solution being devised in the future was further undermined by Sandys when he added an entirely new paragraph on disarmament. This made it clear that 'In the long run' it was only through 'comprehensive disarmament' that 'nations can be saved from mutual destruction and mutual ruination'. By suggesting that as long as nuclear weapons existed Britain could not be protected, this paragraph completely negates any optimism that might have been introduced by entertaining a possibility that it was only impossible to defend yourself against nuclear weapons 'at present'.[384]

The section on defending the deterrent received similar treatment. The alterations Sandys had made to his copy of the third proof were carried over into the updated draft, and peace was now said to 'largely' depend upon deterrence. This would have satisfied those who wished to stress the role of conventional forces in deterring Soviet aggression. The fifth proof also saw 'great cities' changed to 'the country as a whole', as not to imply that all major settlements would be effectively written off in any global war. However, this is again undermined by the insertion of a new paragraph that makes clear the threat of unmanned weapons. The third proof had said 'There are grounds for hoping that it may ultimately prove possible to provide missile defences against even attack by ballistic rockets', and followed this by claiming that Britain was engaged in joint research with the United States in doing so.[385] In the fifth proof this was replaced by the following: 'It must be expected that, in a few years' time, the threat of raids by manned bombers will be superseded by the threat of bombardment by ballistic rockets. It is hoped that it may ultimately prove possible to devise missile defences against even this form of attack'. Not only does this re-written statement put a speculative timeframe on the unmanned weapons threat becoming a reality, but 'grounds for hoping' becoming 'hoped' removes the notion of an informed basis for any optimism, serving to make a functional defence against them much less likely in the minds of the reader.[386]

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[384] *Ibid.*
[385] 'Defence: Outline of Future Policy - 3rd Proof'; DSND 6/52.
[386] 'Defence: Outline of Future Policy - 5th Proof, 26 March, 1957'; CAB 129/85, C. (57) 79.

The sixth proof was altered in much the same way, with the main difference being that the threat of manned Soviet bomber aircraft would now be 'augmented by', rather than 'superseded by', unmanned weapons. Everything else remained intact.[387] The eighth proof equally so, which moved somebody to suggest in the Cabinet meeting in which it was discussed that 'it might be unwise at this stage to state categorically that there would never be a requirement for supersonic bombers or for further developments in fighter aircraft, since there could be no certainty that guided weapons and ballistic rockets would meet all future needs'.[388]

The White Paper

Defence: Outline of Future Policy was published on 4 April, and the definitive version remained true to Sandys' original vision, albeit slightly tempered in certain respects. The spectre of thermonuclear weapons and 'rocket weapons of all kinds' was raised in the opening paragraphs, and British strategic priorities had finally realised the directive of June 1953. In the sections detailing Britain's approach to the nuclear deterrent, Sandys had managed to go even further in the finished article than in his numerous drafts, with the defining passage from the White Paper reading as follows:

> It must be frankly recognised that there is at present no means of providing adequate protection for the people of this country against the consequences of an attack with nuclear weapons. Though, in the event of war, the fighter aircraft of the Royal Air Force would unquestionably be able to take a heavy toll of enemy bombers, a proportion would inevitably get through. Even if it were only a dozen, they could with megaton bombs inflict widespread devastation.[389]

The fifth proof had used 'the people of this country', but this was revised to 'the whole country' in subsequent proofs. By reverting back to the idea of people being undefended, the nuclear weapons threat became more general, moving away from just concentrated settlements, and becoming something that could reach everybody everywhere, which could have been a reference to nuclear fallout. From this point on,

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[387] 'Defence: Outline of Future Policy - 6th Proof, 28 March, 1957'; CAB 129/85, C. (57) 80.
[388] CAB 128/31 CC. (57) 28: 2 April, 1957.
[389] Sandys' personal copy of *Defence: Outline of Future Policy*; DSND 6/52.

the White Paper actually rowed back slightly on some of Sandys' earlier versions, and Grove lists a number of points on which the Admiralty had appeared to have gotten the better of Sandys; the main victory being the retention of a carrier force.[390] There was also, presumably under Treasury pressure, no firm commitment to the manufacture of a British ballistic missile; although it did say Britain 'must possess an appreciable element of nuclear deterrent power of her own', and that there would be no further effort to develop a supersonic manned bomber. In addition to this, the inability to defend the whole country as a reason to defend bomber bases was dropped; air power remained 'not by itself a complete deterrent', with the Free World also needing to be 'firmly defended on the ground'. The Navy was even given credit as an 'effective means of bringing power rapidly to bear in peacetime emergencies or limited hostilities', even if its role in global war was still reckoned to be 'somewhat uncertain'.[391]

The White Paper even left the door open to 'broken-backed' warfare, saying 'there is the possibility that the nuclear battle might not prove immediately decisive'.[392] When all of this is considered against Sandys' previous drafts, the finished product appears to be something of a compromise piece. However, it has to be kept in mind that this was, as its name suggested, still only an outline of future policy. Precisely how each branch of the Armed Forces would meet its new obligations was, at this point, still to be determined. In this sense Sandys had succeeded in his primary objectives. He had reconfigured Britain's strategic priorities in accordance with his 1953 recommendations, just as he had finally had it recognised at an official level that Britain could not defend itself effectively in a global war. He had not been able to explicitly base British striking power on unmanned weaponry in this April document, but he had at least introduced an awareness of its power into the defence debate, and there was still room for him to move policy towards embracing it as whole-heartedly as he had suggested during the Radical Review.

Whilst Sandys had seen his radicalism restrained by the friction of the policy-making process, the press reacted to the White Paper as a watershed moment in British defence policy. The conservative press was broadly supportive, with the *Daily Express* hailing an 'astonishing revolution in military planning - the sudden rise to supremacy of the

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[390] Grove, *Vanguard to Trident*, pp. 203-10.
[391] *Ibid.*
[392] *Ibid.*

scientist over the Service chief', and the *Daily Mail* stating its belief that the White Paper 'will be numbered among the great State papers of our time'.[393] Equally, the left-wing press was disturbed by its conclusions, with the *Daily Mirror* demanding that the government 'realise that the people of this country will not be content to live forever in a twilight world, haunted by the shadow of the H-bomb', and calling for an international disarmament summit.[394] More specific and balanced points were to be point in the *Manchester Guardian*, where its aviation correspondent, 'A Student of the Air', criticised the White Paper's emphasis on unmanned weaponry, reminding readers that 'The Germans spent more than £100 million on developing the V2, and the modern ballistic missile is more complicated and therefore more expensive'.[395] *The Spectator* played down the revolution talk, but praised Sandys by saying that 'unlike his predecessors, he recognises the obvious when he sees it', as well as making a direct reference to the Second World War:

> Since the war successive Ministers have been faced with the dilemma that the country's conventional armament has been largely useless... And the lesson of the guided missile was left out of account. The lesson should have been learned on the day the first V2 landed in England - that henceforth the fighter and the bomber were obsolescent. What Mr. Duncan Sandys has done is to see that these facts, for the first time, are collectively admitted. His White Paper is a model of good sense, as far as it goes. But it can reasonably be criticised on the grounds that it does not yet go far enough.[396]

Macmillan was happy that the White Paper had received 'on the whole, a very good press', and happier still that its stated reliance on nuclear weapons 'throws the Socialists into still greater confusion'.[397] However, he also noted that the 'political side' of the opposition to the White Paper could pose a threat if the 'sentimental appeal' of more traditional policies could be 'cynically exploited'.[398] The politics of the White Paper

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[393] 'The NEW Men of Power'; *Daily Express*: 5 April, 1957 and 'Defence Revolution'; *Daily Mail*: 5 April, 1957; *The Daily Telegraph* was equally supportive, backing 'the end of the R.A.F. as we have known it'; 'Strategy for New Times'; *The Daily Telegraph*: 5 April, 1957; DSND 55.
[394] 'NOT THE WAY TO PEACE'; *Daily Mirror*: 6 April, 1957; DSND 55.
[395] 'R.A.F. Critics of White Paper: Missiles not last word' and 'Switch to Missiles a Blow to Aircraft Industry'; *Manchester Guardian*: 6 April, 1957; DSND 55.
[396] 'Glimpse of the Obvious'; *The Spectator*: 12 April, 1957; DSND 55.
[397] 5 April, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 27.
[398] Macmillan, *Riding the Storm*, p. 266; Groom noted that opposition to the White Paper from Labour was 'strangely muted', probably due to 'the fear of precipitating dissension within the party'; Groom, *British Thinking About Nuclear Weapons*, p. 212.

were put to the test in the 16 April House of Commons defence debate. Sandys proposed that his 'broad reappraisal of future defence policy' be voted through, and saying that it was 'founded on the recognition of two basic facts':

> The first is that, in present circumstances, it is impossible effectively to defend this country against an attack with hydrogen bombs... The second basic fact on which this policy is based is the fact that, whether we like it or not, we cannot go on devoting such a large part of our resources - and, in particular, of manpower - to defence. Since it must now be accepted that adequate protection against all-out nuclear attack is impossible, we believe that the British people will agree that the available resources of the nation should be concentrated not upon preparations to wage war so much, as upon trying to prevent that catastrophe from ever happening.[399]

Although these were Sandys' own words, spoken in a highly-politicised context, they still point to his strategic policy preferences having carried significant weight in formulating a cost-effective defence policy for Britain. This stands in contrast to them being seen as a secondary concern utilised in order to patch together a seemingly viable policy from the wreckage of his blinkered pursuit of spending reductions. He went on to say that civil defence would 'remain an essential part of the defence plan', but qualified this by saying there could be 'no real safety in the world until there is disarmament', as he had used the idea of disarmament in the fifth proof to undercut any optimism surrounding a potential solution to the coming threat of unmanned weapons.[400] This was coupled with an appeal to 'recognise the grim fact that the only means which the free world possesses to protect itself against Communist aggression and domination is the power to threaten retaliation with nuclear weapons', and the stated policy of the government for Britain to 'possess some element of nuclear deterrent power of her own'.[401]

When Sandys suggested that both sides of the House agreed on this point, he was interrupted, giving him a chance to highlight what the Conservatives considered to be division in opposition ranks over support for nuclear weapons. He brought up previous

[399] Hansard HC vol 568 cols 1758-59 (16 April, 1957).
[400] Hansard HC vol 568 col 1759 (16 April, 1957).
[401] Hansard HC vol 568 col 1760 (16 April, 1957).

occasions where the Labour Party had supported the possession of an independent nuclear capability, which then allowed him to elaborate on his own policy preferences and in doing so develop on what he had managed to publish in the White Paper. He pointed out that many considered the presence of American bomber aircraft in Britain to represent an adequate deterrent force, adding that so long as this was the case 'it might conceivably be thought safe - I am not saying that it would - to leave to the United States the sole responsibility for providing the nuclear deterrent':

> But, when they have developed the 5,000 mile inter-continental ballistic rocket, can we really be sure that every American Administration will go on looking at things in quite the same way? We think that it is just as well to make certain that an appreciable element of nuclear power shall in all circumstances remain on this side of the Atlantic, so that no one shall be tempted to think that a major attack could be made against Western Europe without the risk of nuclear retaliation.[402]

Following some further goading of Labour, using their public statements to suggest that they agreed with him even if they did not realise it (the relevant file in Sandys' archive suggests that a significant amount of the preparation for this speech concerned itself with past Labour Party policy statements), Sandys got on to the idea that the nuclear deterrent consisted 'not only the bomb, but also the means of delivering it', and that this required that the medium bomber fleet eventually be 'supplemented' by unmanned weapons.[403] This echoed the White Paper, which had also used 'supplemented' in the relevant passage, in comparison to earlier drafts which had predicted manned bomber aircraft being replaced by unmanned weapons. However, in the section of his speech which covered the future of the Air Force his words became much more definitive, saying that 'We are unquestionably moving towards a time when fighter aircraft will be increasingly replaced by guided missiles and V-bombers by ballistic rockets'. He said that this would not happen 'overnight', and that 'there will still remain a very wide variety of roles for which manned aircraft will continue to be needed', but these read like qualifying statements.[404] Sandys clearly did believe that manned bomber aircraft would simply be replaced, rather than supplemented, by

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[402] Hansard HC vol 568 cols 1760-61 (16 April, 1957).
[403] DSND 16/6/1; Hansard HC vol 568 col 1763 (16 April, 1957).
[404] Hansard HC vol 568 col 1763-64 (16 April, 1957).

unmanned weapons, and his previous reference to United States' policy coming to be determined by their possession of these weapons supported this.

The Labour Party had submitted an amendment expressing regret at what they saw as an 'undue dependence on the ultimate deterrent', and Sandys questioned the logic of this proposal.[405] Accepting that this was a 'very understandable anxiety', he nevertheless ruled it out as arising 'from a tendency to generalise about the nature of war', which inadvertently brought his speech back to his strategic priorities:

> One must distinguish between major global war, involving a head-on clash between the great Powers, and minor conflicts which can be localised and which do not bring the great Powers into direct collision. Limited and localised acts of aggression, for example, by a satellite Communist State could, no doubt, be resisted with conventional arms, or, at worst, with tactical atomic weapons, the use of which could be confined to the battle area.[406]

'Quite impossible' was shouted out, before Sandys finished the point by comparing this with a full-scale Soviet offensive into Western Europe, which he said would almost certainly have escalated into nuclear war because it was 'inconceivable that either the Soviet Union or the free world would allow itself to be defeated, with all that that would mean, without throwing everything it had into the battle, including nuclear weapons'.[407] Richard Crossman, the Labour representative for Coventry East, using Germany as his example of a 'satellite Communist State', asked whether Sandys really believed that tactical nuclear weapons could be used in his described example without descending into all-out nuclear war.[408] Macmillan wrote in his diary that this 'mix-up about strategic and tactical nuclear weapons' marred Sandys' otherwise 'admirable' performance in the defence debate, but the answer Sandys gave showed there was no muddled thinking on his part.[409] He accepted that Germany was not a good example, since 'There are such enormous forces there and the great Powers are involved', but he did not rule it out completely:

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[405] Hansard HC vol 568 col 1764 (16 April, 1957).
[406] Hansard HC vol 568 col 1765 (16 April, 1957).
[407] *Ibid.*
[408] *Ibid.*
[409] 16 April, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 31.

> I am saying that it is quite conceivable that, in certain circumstances, it might be possible to resist an act of aggression, for example, it might have been possible in Korea - I do not know, but it is a possibility - by the use of tactical nuclear weapons without necessarily bringing the whole world down in conflagration.[410]

When it was suggested from the opposition benches that 'we really cannot shoot these things around without having the whole of world opinion and world antagonism against us', Sandys said he was not hoping to shoot anything around, only 'trying to show that there are different degrees of war', and that the use of tactical nuclear weapons 'might not necessarily lead to the use of the wholesale weapons of mass destruction on great cities'.[411] Whilst Macmillan might not have wished to see the debate become stuck on this point, this was consistent with Sandys' previous positions on nuclear weapons. How realistic it was that tactical nuclear weapons would not have led to the introduction of their strategic counterparts is impossible to say, but if Sandys held the belief that nuclear weapons were still a practical policy alternative, as he had when asked about the Korean War in December 1950, then this statement would be logically consistent with what he had previously said. If he did not believe that there was a clear distinction between nuclear and non-nuclear - 'conventional' - weapons, then he would have had no reason to suppose that the use of tactical nuclear weapons would have represented the crossing of a threshold, at which point the spiral into strategic nuclear war between East and West must inevitably follow.

Crossman asked whether Sandys had been moved to reduce British forces in Europe 'on the assumption that a limited war can be fought with atomic tactical weapons'. Sandys jokingly replied 'All I would say is that we should certainly achieve something if we did that', before making sure to confirm that this was not the case.[412] When asked to explain his previous remarks once more, Sandys said he would go over it again, and his reasoning is worth quoting at length:

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[410] Hansard HC vol 568 col 1766 (16 April, 1957).
[411] *Ibid.*
[412] Hansard HC vol 568 col 1767 (16 April, 1957).

> First, I was talking about the various degrees of war. There is the all-out global war, the head-on clash and collision between the United States and the Soviet Union. I do not believe, and I do not think anybody else can seriously believe, that that could take place without the use of nuclear weapons. Then there is the possibility of acts of aggression - not where the two giants are both involved in a clash with one another - as, for example, in Korea. That was dealt with in Korea by conventional weapons.
>
> I cannot say that, if, in some years' time, a similar situation arises, atomic tactical weapons might not be used by one side or another. Obviously, the bigger the weapon one uses, the greater the risks one takes of bringing the world to the verge of catastrophe. All I am saying is that the possibility is not to be excluded that those weapons might be used without necessarily bringing down the whole cataclysm upon the world.[413]

Groom has interpreted Sandys' answers as the government declaring its belief that 'nuclear weapons would not automatically be used in the defence of Europe and that their use would not necessarily escalate'.[414] If Sandys' previous statements are taken into account, this was not what he meant. He was not seeking to normalise nuclear weapons in order to introduce an idea of graduated deterrence, the idea that tactical nuclear weapons could be openly exchanged by the Great Powers in military theatres without leading to the whole-scale massacre of opposing populations. Nor was he trying to suggest that the government might have second thoughts about using them against a Soviet invasion of Western Europe. These statements simply confirm that Sandys almost certainly had little or no regard for any distinction between nuclear and non-nuclear weapons from the perspective of their being legitimate policy options, and that he therefore believed that Britain would have been wise to retain its capacity to develop and deploy tactical nuclear weapons. He clearly respected the power of nuclear weaponry, agreeing that 'the bigger the weapon' the more likely it was to provoke a reaction; but there is no sign of him treating their size as a special consideration, or of seeing nuclear weapons as a revered other level of defence. This in turn feeds into his preferred strategic priorities. If deterrent Soviet aggression was actually a matter of preparing to annihilate the Soviet Union, then there was no logical reason to believe that different weapons were only suitable for different phases on warfare.

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[413] Hansard HC vol 568 cols 1767-68 (16 April, 1957).
[414] Groom, *British Thinking About Nuclear Weapons*, p. 210.

This point was returned to later in the debate when Richard Stokes, representing Ipswich for the opposition, interpreted Sandys' comments in the same way that Groom later would, saying that it was a 'complete error of judgment to think that we can get away with what is called the graduated deterrent', because it was 'ridiculous to suggest that a losing side... will not go on to something bigger'.[415] Stokes had been a vocal critic of the strategic bombing campaign during the Second World War, but felt that in light of the punishments meted out to the defeated leaders after that war, escalation would certainly follow if another global war began to unfold and tactical nuclear weapons were introduced at an earlier stage. Sandys replied once again that he was not talking about graduated deterrence, but stating that 'in certain circumstances' tactical nuclear weapons could be used 'without necessarily bringing about a wholesale cataclysm'. Stokes, much like those who had written into the *Streatham News* in 1950 to deride Sandys as a warmonger, called this 'an abomination' and asked 'Does the right hon. Gentleman really suggest that we might have used one of these tactical nuclear weapons at Suez?'[416]

Conclusion

It is difficult to see how Sandys did not bring definite strategic policy preferences to the policy-making process that created the 1957 White Paper. He was asked to reduce the burdens that conscription and confused procurement placed on the economy, and he clearly set about doing so. But Head had also been asked to do this, quitting when he did not think it was possible to reconcile these new realities with a coherent strategic concept. Sandys did think it was possible, and this was because he had worked out how it could be done in 1953. Whilst there has been comparatively little written about the Radical Review and Sandys' role in previous attempts to rein in defence spending, once we compare the proposals Sandys had put forward during the Radical Review and what he attempted to force into the White Paper, it becomes clear that Sandys possessed a discernible set of sincerely held policy preferences, even if Slessor's criticism that the White Paper failed to follow its own logic was valid in reference to its final form.

[415] Hansard HC vol 568 cols 1833-34 (16 April, 1957).
[416] Hansard HC vol 568 col 1834 (16 April, 1957).

To point to the White Paper policy-making process as evidence that Sandys was lacking in his appreciation of the need for an overall strategic concept also demonstrates a tendency to misunderstand the purpose of the White Paper. To this end its official name is suggestive, and Sandys said himself that its purpose was to provide a new basis for British strategy, rather than to serve as a comprehensive planning document. It is not for this thesis to say whether Sandys' ideas and a more thorough commitment to 'the short war assumption' would have proven more successful in their original form. Nor is it particularly important that Sandys was unable to have things all his own way. What matters is that the central strategic concepts upon which the White Paper was based, whether or not most people considered them 'tendencies which have long been obvious', had certainly long been obvious to Sandys. The downgrading in importance of those forces not regarded as central to deterring Soviet expansion; the frank acceptance that Britain could not defend itself against thermonuclear attack; the - admittedly diluted - expectations that unmanned weaponry would replace manned bombers and fighters. These were the 'obvious' trends which Sandys had first advocated at a time when they were deemed 'revolutionary' by the Ministry of Defence, and which he had maintained and developed in connection with the economic, political, and technological changes that had occurred in the intervening years. If Sandys is to be criticised in this regard then criticism should be based on his actions at the Ministry of Defence between the publication and defence of the White Paper and his departure in October 1959, when, as Macmillan wrote in his memoirs, 'The complexity and expense of modern weapons, together with the heavy risks involved with novel and untried devices, were to prove, during the years that followed, a perpetual source of difficulty and disappointment'.[417]

[417] Macmillan, *Riding the Storm*, p. 268.

The Struggle over the Nuclear Delivery System - 1957-1960

This thesis has so far established that Sandys' experiences of the Second World War had left an indelible impression on him in relation to the potential of unmanned weaponry. This informed his strategic concepts by causing him to see unmanned weaponry as something that could not be defended against. The next logical move on this trajectory was to ensure that the British arsenal had its own ballistic missile. By 1957 there was already an option on the table in this area, Blue Streak. Although the White Paper had made no firm commitment to Blue Streak, it is clear that Sandys intended for it to enter service. There were problems with this route, however, as rising costs placed increasing pressure on the missile's development after 1958. This financial pressure, together with the rapid progress made by the United States in sea-launched missiles, like Polaris, and air-to-surface weapons, such as Skybolt, forced the Service Ministers to begin considering alternatives, and support for Blue Streak gradually waned. Sandys remained largely unmoved by the growing opposition to Blue Streak, and eventually a point was reached where Sandys' apparent refusal to give proper consideration to the merits of Polaris, the submarine-launched ballistic missile system favoured by the Admiralty, caused a high-ranking admiral to complain that Sandys 'will do all in his power to prevent any alternative to BLUE STREAK from being even considered'.[418] Because this - sometimes exaggerated - belief in the power of unmanned weaponry was the intellectual basis for his strategic concepts, the possession of a truly effective nuclear force based on unmanned weaponry became intrinsically linked to Sandys' attempts at re-organising British strategic priorities. Consequently, the looming failure of Britain's independent unmanned weapons programme played a large part in Sandys' removal from the Ministry of Defence after the 1959 election, as the hard reality of British fiscal weakness and technical backwardness made his strategic concept redundant.

The government announced the cancellation of Blue Streak (as a weapon system. It would carry on in an altered form in the civil programme as Black Knight) in April 1960, six months after Sandys had left the Ministry of Defence. Following this decision, it was eventually decided to base Britain's nuclear deterrent on the American-made Skybolt air-launched ballistic missile. Skybolt promised both relative cheapness in terms of Britain's contribution and would extend the service life of the expensively-assembled medium bomber force. An agreement was reached between Macmillan and

[418] Charles Lambe to Selkirk: 25 May, 1959; ADM 205/202.

Eisenhower in which Britain would alter the V-bombers to carry the missiles, which they would receive without the American warheads that would have undermined their operational independence.[419] In the event, the Skybolt project was cancelled in December 1962 after poor performance in testing throughout the year, combined with the rapid ascent of both Polaris and land-based intercontinental ballistic missiles in America. President John F. Kennedy had offered to share development costs with Britain, but Macmillan was wary of making such an open-ended commitment to a programme he thought it would be difficult for Britain to influence, and he declined. The cancellation caused a furore in Britain, and almost left Britain with no deterrent capability to succeed its manned bombers. Macmillan was able, however, to secure Polaris at a summit in the Bahamas with an emotional appeal to Kennedy that recalled everything Britain and the United States had endured together - what the Head of the Diplomatic Service later described as the Prime Minister's 'veteran of the Somme' act.[420]

In order to fully understand the positions Sandys took in defence of Blue Streak between 1957 and 1960, his attitudes towards alternative weapon systems have to be considered, as does the changing nature of the political and strategic context in which he operated. The two alternative weapon systems that occupied most of his time at the Ministry of Defence were Thor, an American-made intermediate-range ballistic missile, which was initially offered to Britain in July 1956 with certain conditions of access; and Polaris, which the Admiralty backed with an intensive lobbying campaign covertly supported by their counterparts in the United States Navy.[421] Because Skybolt did not enter serious development until early 1959, it received comparatively little attention from the Ministry of Defence during Sandys' period as Minister. Consequently, whilst this section seeks to detail Sandys' interactions with those aspects of the policy-making

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[419] See: 'SKYBOLT: Note by the Minister of Defence, 20 June, 1960'; CAB 129/101 C. (60) 97; Macmillan wrote in his diary on 20 February, 1960: 'The Chiefs of Staff want to abandon Blue Streak and have a mobile rocket, prob[ably] POLARIS, to be carried on a submarine. The arguments include question of a new American air to ground missile, wh[ich] may increase the life of the present Bomber force by 3 years of more'; Catterall, *The Macmillan Diaries: 1957-66*, p. 272; an informal understanding was also made for facilities to be made available for American Polaris submarines in Scotland, the precise details of which were painstakingly worked out over the rest of the year.

[420] Philip de Zulueta, Macmillan's Private Secretary, recalled Macmillan directly alluding to 'the great losses and the great struggles for freedom and so on' that their two nations had endured; Hennessy, P., *The Secret State: Preparing for the Worst, 1945-2010* (London: Penguin Books, 2010), p. 65; Sampson writes that Macmillan's 'memories of Passchendale gave him authority' when discussing disarmament with Kennedy; Sampson, *Macmillan: A Study in Ambiguity*, p 226; see also: Ball, S. J., 'Macmillan and British Defence Policy' in Aldous, R. and Lee, S. (eds.), *Harold Macmillan and Britain's World Role* (London: Macmillan, 1996), pp. 67-96 and Murray, D. 'Macmillan and Nuclear Weapons: the SKYBOLT Affair' in Aldous, R. and Lee, S. (eds.), *Harold Macmillan: Aspects of a Political Life* (London: Macmillan, 1999), p p. 217-242.

[421] Boyes, J., *Project Emily: Thor IRBM and the RAF* (Stroud: The History Press, 2008), p. 45.

process that related directly to alternatives to Blue Streak as the basis for Britain's nuclear capability at both the Ministry of Defence and the Ministry of Aviation, it is forced to concentrate largely on Sandys' attempts to undermine Polaris and Thor as possible threats to the completion of the Blue Streak programme, leaving Skybolt and its relationship to Blue Streak for the next section.

The Political and Strategic Context: Disarmament and Anglo-American Relations

Following the publication of the White Paper in April 1957, attention turned to the impending series of nuclear tests in the Central Pacific, which were expected to prove that Britain was capable of manufacturing thermonuclear weapons of its own. Eden had announced the tests the previous June, telling the House of Commons that Britain intended to 'carry out a limited number of nuclear test explosions in the megaton range... during the first half of 1957', leaving Macmillan with a difficult schedule.[422] The first test (15 May) was supposed to demonstrate Britain's capacity to create a megaton device, making this a politically significant event as it was considered that any worthwhile thermonuclear device ought to provide that sort of yield.[423] Unfortunately for the government, the design fell short of its intended yield, and Macmillan could only claim that 'this explosion makes a notable advance in the development of our deterrent power' whilst being forced to remain cagey regarding 'any detailed information about the precise yield, type and design of the weapon exploded' on spurious national security grounds.[424] The political value of a functioning megaton device was made clear the following day when Macmillan told a meeting of Conservative women that after the tests 'we shall be in the same position as the United States or Soviet Russia', and used these developments to defend the White Paper. Having had his usual fun at the expense of the Labour Party, Macmillan told his audience that he would 'never agree' to nuclear disarmament without a similar reduction in non-nuclear weapons, since such a move would not end the prospect of any new global war as disarmament advocates claimed, but 'merely make it virtually certain that if it came we should lose it'.[425]

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[422] Hansard HC vol 553 col 1283 (7 June, 1956).
[423] *The Times*' science correspondent had taken Macmillan's brief answers straight after the first test as 'a guarded confirmation' that the device had produced a megaton yield, which he referred to as 'a hydrogen bomb in the popular sense'; '"Device" a Hydrogen Bomb'; *The Times*: 17 May, 1957.
[424] Hansard HC vol 570 col 1035 (21 May, 1957).
[425] He reinforced this point by recalling that 'I was in a conventional war across the Channel. Just 40 years ago in the long drawn-out battle of Passchendaele we suffered nearly 400,000 casualties... We must not forget that - nor our losses in the Second World War'; 'Mr. Macmillan Defends Policy on Hydrogen Bomb'; *The Times*: 23 May, 1957.

The government remained tight-lipped after the next test (31 May), but it was clear from the headline in *The Times* that 'Britain's second hydrogen bomb' was bigger than the first.[426] This device was sufficiently close to its megaton target for the government to feel validated. In reality, this was a very large, and very expensive, non-thermonuclear device that was unsuitable for use as a weapon; a fact which remained secret until the end of the Cold War.[427] Still, valuable lessons had been learned from the tests, and the principles of the White Paper remained within Britain's projected capabilities. These were re-affirmed at a 31 July Defence Committee meeting where Macmillan appeared to have moved away from his previously ambiguous attitudes towards real independence, and now laid down priorities that had more in common with Sandys' early drafts of the White Paper than the finished article. Here Macmillan stated that 'our objective should be to remain a nuclear Power and that for this purpose we should have within our control sufficient nuclear weapons and their means of delivery to constitute an independent deterrent'.[428]

It cannot be said with any certainty what prompted this small but significant shift from Macmillan, but he was most likely sparked into action by the proposals put forward in June by Harold Stassen, Eisenhower's Special Assistant for Disarmament. These proposals, which Macmillan doubted had even been approved by the State Department, called for an eventual end to nuclear testing, and also for an end to the production of fissile material for military purposes.[429] The inability to test new weapons would have been bad enough, but banning the production of fissile material could have fatally undermined Britain's nuclear ambitions, and Macmillan reacted by wondering 'Is this America's reply to our becoming a nuclear power - to sell us down the river before we have a stockpile sufficient for our needs?'[430] The Foreign Secretary said that Britain would be 'seriously handicapped' by the proposals unless American 'know-how' could make up for what Britain would lose, adding that an early moratorium on the production of fissile material 'would completely disrupt our nuclear defence programme, largely deprive us of the deterrent and upset the whole basis on which our present defence

[426] 'Second British Nuclear Test in the Pacific'; *The Times*: 1 June, 1957.
[427] There was a further disappointing test on 19 June.
[428] CAB 131/18 D. (57) 6th Meeting: 31 July, 1957.
[429] Macmillan, *Riding the Storm*, p. 300; McGeorge Bundy writes that Eisenhower 'allowed test suspension to become the first order of business for his senior negotiator Harold Stassen'; Bundy, M, *Danger and Survival: Choices About the Bomb in the First Fifty Years* (New York: Random House, 1988), p. 332.
[430] 2 June, 1957; Catterall, *The Macmillan Diaries: 1957-66*, pp. 40-41.

planning is based'. Yet, in spite of these realisations, Lloyd was more concerned about Britain appearing to sink this latest round of disarmament talks single-handedly, and therefore advocated full co-operation with the United States so as not to jeopardise the prospect of them providing the knowledge and fissile material that these proposals would have denied the British programme.[431] To this end he told the Cabinet that the Stassen Proposals were 'broadly acceptable'. This, however, put him at odds with Sandys.[432]

For Sandys, only 'comprehensive disarmament' was in Britain's interests. His conceptual framework led him to conclude that, as 'the security of the Western world rests almost wholly upon the nuclear deterrent' then to weaken this shield was folly. With the West robbed of this technological advantage, he said the Soviet Union's superiority in manpower and non-nuclear weapons gave it the clear advantage in its supposed aim of conquering Western Europe and beyond. Sandys did, however, expect that both the United States and the Soviet Union would be aware of this, and thought that any agreement that went beyond the cessation of testing and an end to the further production of fissile material for military purposes was unlikely. Their nuclear stockpiles would not, he thought, be reduced. This outcome represented the worst-case scenario for Sandys, which he thought 'would virtually knock Britain out as a nuclear power'. Despite this, Sandys was conscious that it would prove 'extremely awkward' if Britain was perceived to have been responsible for 'wrecking the first hopeful step towards world disarmament', so he suggested that Britain support the proposals on the following conditions:

1) That steps towards conventional disarmament be 'firmly laid down' in any agreement, and that the timing of these steps be linked to the reduction in nuclear armaments.
2) That this should be 'taken far enough' as to ensure that in the post-nuclear environment the Soviet Union 'would not be left in a position to dominate Europe with conventional arms'.
3) That this be 'effectively inspected and controlled'.
4) That if this could not be achieved 'within a short space of years', the United States agreed to provide Britain with enough information 'to perfect our own

[431] 'Disarmament: Note by the Foreign Secretary, 21 June, 1957'; CAB 129/87 C. (57) 146.
[432] CAB 128/31 CC. (57) 46: 24 June, 1957.

nuclear weapons', and the fissile material needed for a stockpile of nuclear weapons 'primarily for defensive purposes'.[433]

It is worth mentioning Sandys' attitude towards disarmament before moving on to his approach to the nuclear delivery system because, as well as being the catalyst for hardening Macmillan's earlier ambiguity in relation to British-built weapons, it ultimately confirms Sandys' views regarding the distinction between nuclear and non-nuclear weapons, which lead into his views on nuclear independence. In hindsight, it might initially appear as though Sandys had submitted deliberately unrealistic recommendations, since it is difficult for the modern reader to imagine that the Soviet Union would have allowed its non-nuclear military strength to be 'effectively inspected and controlled' by being placed under some arbitrary ceiling determined in accordance with what foreign bodies thought was enough to take over Western Europe. However, it is worth remembering that Sandys had spearheaded the post-war drive towards a United Europe, and that he would later involve himself with the World Security Trust, a movement dedicated to establishing World Government.[434] This was no trivial interest. Sandys visited many countries on behalf of the World Security Trust, meeting many senior political figures.[435] It is also worth remembering that this sort of inspection regime was ultimately established in the 1990s as the Soviet Union unravelled, under the Conventional Forces in Europe (CFE) inspection system, albeit at a time when there was no central authority with the will or ability to challenge American nuclear dominance.

Sandys was not somebody who considered national sovereignty to be sacrosanct, or that notions to that effect would prove insurmountable.[436] For Sandys, nuclear

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[433] 'Disarmament: Note by the Minister of Defence, 23 June, 1957'; CAB 129/88 C. (57) 151.

[434] Sandys' archive contains files relating to this organisation, the aims of which were 'to establish eventually some form of World Government'. One report describes Sandys' visit to Poland on their behalf as 'wholly unproductive' owing to the Polish Government being 'exclusively preoccupied with the problem of central Europe and the fear of a German war of revenge; 'World Security Plan - Progress Report'; DSND 11/4/1.

[435] On a trip to New York over September and October 1966 he met Robert F. Kennedy and was put in contact with the United States Secretary of State Dean Rusk, the Secretary of Defense Robert McNamara, and noted multilateralist J. William Fulbright; DSND 11/1/18.

[436] In a May 1976 House of Lords debate on European integration, Sandys said that the Council of Europe had never been 'an end in itself', describing it as 'the first step towards the achievement of a much larger and wider objective... in my view the objective should be nothing less than the eventual creation of a United States of Europe'; Hansard HL vol 370 col 966 (12 May, 1976); Bertrand Russell name-checked Sandys as an advocate of world government as the solution to the Cold War stand-off, suggesting that like-minded people who considered it to be the practical solution 'will encounter stubborn resistance in

disarmament would have simply weakened Britain to an unacceptable degree. This view grew from his belief that nuclear weapons were not a separate 'evil' to be dismantled on their own, but simply another weapon, the utility of which had important implications for his definition of an independent nuclear capability. This is why he told the Cabinet that any ban on the manufacture of fissile material 'would undermine our defence policy', one of the main objectives of which 'was to maintain our political independence'. This he said 'would be frustrated if we were prevented from producing our own nuclear weapons and the United States and Soviet Governments refused to destroy the stocks of nuclear weapons which they would have accumulated by 1960'.[437]

Sandys addressed criticisms that his plans for comprehensive disarmament were 'too idealistic and overlooked the practical difficulties involved' in a May 1958 Cabinet meeting. There he described the idea as 'militarily sound' and an 'attainable ideal'.[438] Further to this, he told the 1958 Conservative Party conference that only 'complete disarmament, supervised and controlled by a World Authority, backed by [a] World Police Force' would suffice.[439] Five months later, he responded to charges that 'this is a bit airey fairy' in a television interview by saying that in the long-term, 'nothing less than this would be any good'. His reasoning was that because nuclear weapons kept the peace, their abolition 'will greatly increase the likelihood of conventional wars'. His fear was that in the end this would lead to a nuclear war since, as soon as the Third World War broke out along non-nuclear lines, 'both sides will start a mad race to produce nuclear weapons', which he thought would only take between six and twelve months.[440] For Sandys, the consequence of nuclear disarmament would ultimately be uncontrolled nuclear war; the very thing disarmament intended to prevent. This apparent fatalism creates something of a paradox when placed alongside his 'airey fairy' notions of world government, but it is one which emerges from two sincerely held positions. Firstly, he believed there was an inevitable shift towards government by supranational organisations taking place. Secondly, Sandys' belief in the utility of nuclear weapons

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the two most powerful protagonists, namely, America and Russia'; Russell, B., *Common Sense and Nuclear Warfare* (London: Routledge, 2001), p. 59.

[437] CAB 128/31 CC. (57) 46: 24 June, 1957; Norman Brook prepared a note for the Defence Committee that linked 'the effective measure of our authority as a world power' to 'our stock of fissile material', noting that 'At present we are still only a potential nuclear power. We shall not retain our influence in world affairs unless we go forward and turn the potential into a reality'; 'Fissile Material for Nuclear Weapons: Note by the Secretary of the Cabinet, 27 July, 1957'; CAB 131/18 D. (57) 14.

[438] Extract of a Cabinet meeting on disarmament: 1 May, 1958; DSND 6/43.

[439] 'Speech on Defence Resolution to be made by the Minister of Defence, Mr. Duncan Sandys, at the Conservative Party conference at Blackpool, Friday, October 10th, 1958'; DSND 6/17A.

[440] Transcript of Sandys' 12 March 1959 appearance on ITV's 'This Week'; DSND 6/22.

fed the assumption that they would inevitably be called upon as they had been in the closing moments of the Second World War. In this sense, Sandys' all-or-nothing approach to disarmament is perfectly consistent with his well-established belief system and his strategic outlook.

The threat of disarmament remained, but things improved for Britain in late-1957 when the United States was forced to reconsider its unwillingness to allow other nations access to its nuclear knowledge in light of developments in the Soviet Union. In August the Soviets successfully tested the world's first intercontinental ballistic missile, the massive R-7. Sandys views appeared to have been vindicated with the appearance of the next stage of unmanned weaponry that he had previously spoken about. Over a hundred feet tall, and with four times the thrust that Sandys had predicted back in 1953, the descendents of the R-7 entered service in 1959 with the ability to carry megaton warheads to almost anywhere in the world.[441] The fact that it had none of the 'birthmarks' of German technology also meant that the Soviet Union possessed an independent, world-leading missile programme. The missile's design strength was underlined two months later when a modified version of the R-7 launched Sputnik 1, the first artificial Earth satellite, beginning the Space Race.[442]

Lloyd informed the Cabinet that since the Soviet Union was 'seeking to focus world opinion on the military implications of the earth satellite which they had recently launched', it was 'undesirable that we should appear to be unduly concerned about these implications', and he therefore suggested congratulating them on such a 'notable scientific contribution to the International Geophysical Year'.[443] Behind this official policy of faux disinterest, Macmillan quickly used Sputnik to his advantage, writing to Eisenhower asking 'what are we going to do about these Russians?' He said Sputnik had 'brought it home to us what a formidable people they are, and what a menace they present to the free world', before predicting that it might be 'two or three generations' before communism collapsed and allowed the Soviet people to 'revert gradually to ordinary human behaviour'. The point of this letter was eventually reached when he asked:

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[441] Chertok, *Rockets and People - Volume II*, p. 347.
[442] *Ibid.*, p. 73.
[443] CAB 128/31 CC. (57) 72: 8 October, 1957; Macmillan recalled in his memoirs that 'the British public, with characteristic generosity, paid full tribute to this wonderful technical achievement'; Macmillan, *Riding the Storm*, p. 314.

> Has not the time come when we could go further towards pooling our efforts and decide how best to use them for the common good. I believe that if your country and ours could join together to guide and direct the efforts of the Free World we can build up something that may not defeat the Russians but will wear them out and force them to defeat themselves.[444]

Macmillan wanted to see the McMahon Act repealed, and when Eisenhower agreed that the Cold War required Anglo-American leadership 'bound together by common convictions, purposes and principles', this would have seemed promising.[445] Macmillan was invited over to Washington, and before he left he informed the Cabinet that Sputnik had forced the Americans to re-think 'the whole structure of Western collaboration'. It had, Macmillan felt, left them 'anxious, in particular, to review the pattern of their relations with the United Kingdom and to develop a closer relationship with this country'. In addition to working towards the repeal of the McMahon Act, Macmillan said he would push for 'joint Anglo-American machinery' regarding 'political, military and economic issues', and before he left London he was given a list of requests to put before Eisenhower.[446] His list included access to fissile material (or help to make better use of British supplies), and information on designing ballistic missiles. This was followed by a recommendation that he should accept Thor missile sites in Britain, and the further suggestion that should he be able to secure Thor with 'the "strings" off', it could prove viable to re-cast Blue Streak as a joint programme with the United States aimed at developing an even better weapon.[447]

When he arrived in Washington on 23 October, Macmillan told Dulles that if the West held firm 'it was possible that extreme Marxist doctrines would eventually cease to

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[444] 'We had "economic warfare" in the war. We may need it in the cold war'; Macmillan to Eisenhower: 10 October, 1957; PREM 11/2329.
[445] Eisenhower to Macmillan: 11 October, 1957; PREM 11/2329; the night Macmillan wrote to Eisenhower was also the night that the Windscale plutonium production plant caught fire. This could have ruined Macmillan's hopes of further nuclear co-operation with the United States by undermining confidence in Britain as a capable nuclear power, but internal reports that properly detailed the seriousness of the accident were suppressed by the Government; Macmillan wrote in his diary having returned to London 'It is just such a report as the board of a company might expect to get. But to publish to the world (esp[ecially] to the Americans) is another thing. The publication of the report, as it stands, might put in jeopardy our chance of getting Congress to agree to the President's proposal'; 30 October, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 69; 'Thus', writes Horne, 'the world's worst nuclear accident to date went largely unnoticed'; Horne, *Macmillan: Volume II*, pp. 53-55.
[446] Macmillan to Eisenhower: 16 October, 1957; PREM 11/2329; CAB 128/31 CC. (57) 74: 21 October, 1957; 16 October, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 65.
[447] 'Briefing Notes for Meetings: 22 October, 1957'; PREM 11/2329.

dominate the minds of the Russian people and that their threat to the free world would fade', albeit whilst making it clear that such a strategy of attrition depended upon Anglo-American understanding. Dulles agreed, speculating that even this preliminary meeting 'might well have a decisive influence on the course of history'. Dulles' well-developed sense of history led him to conclude that Britain and the United States were both nations whose pasts 'had been dominated by a sense of mission and of destiny', and that only they could 'shake the Western world out of its mood of apathy'. It was then that Macmillan said the following:

> [W]e should begin by establishing the principle that, since the purposes of the United Kingdom and the United States were the same, the independence of the two countries should become interdependence. We should work out how our separate resources - in political, economic, military and propaganda fields - could be pooled for the furtherance of our common purpose.[448]

Macmillan referred to this in his diary as 'quite a romantic picture of what [the] US and UK could do together', noting that the launching of Sputnik had seriously affected the American people, adding weight to his vision.[449] That evening he used an informal reception at the White House to get at Eisenhower, before retiring to the British Embassy 'a little depressed'.[450] His mood was lifted the following day when Eisenhower said he wanted greater co-operation between their two countries, making the exclusivity of this offer clear by adding that he wanted it to come with a degree of secrecy lest Paris or Berlin expect equal treatment. Macmillan hailed the 'exceptionally close personal links' between Eisenhower and himself as proving influential, stressing the seriousness of this new alignment by recalling how they were 'founded in their co-operation in a previous time of crisis'.[451] British and American civil servants were then asked to prepare specific proposals for increased co-operation, and Eisenhower then referred to the provisions of the McMahon Act as a 'great mistake', promising to go 'as far as he could' in overturning this 'blanket of atomic secrecy'. This was what Macmillan had wanted to hear, but when Eisenhower suggested that the best solution might have been

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[448] 'Minutes of the Meeting at the British Embassy: 23 October, 1957'; PREM 11/2329.
[449] 'The Russian success in launching the satellite has been something equivalent to Pearl Harbor. The American cocksureness is shaken'; 23 October, 1957; Catterall, *The Macmillan Diaries: 1957-66*, pp. 65-66.
[450] Macmillan told him that 'if we couldn't get all this done in the next two or three years, with all the advantage of our close friendship, it was unlikely that our successors w[oul]d be able to do the job'; *Ibid.*
[451] Dulles thought it was a 'fortunate coincidence' that Eisenhower and Macmillan led their nations at such a moment in history; 'Minutes of the Meeting at the White House: 24 October, 1957'; PREM 11/2329.

'Some NATO concept of a stockpile or of special forces under SACEUR (Supreme Allied Commander Europe)', Macmillan made sure proposals relating to control of nuclear weapons and 'problems of pooling nuclear potential' were given special consideration.[452] The civil servants concluded that although 'blocks' remained on further co-operation, if these could be rescinded then Britain could save significant amounts of money by using American fissile material. Furthermore, exchanging information and rationalising defence projects would save both countries money, possibly leading to effective defensive solutions to both unmanned weaponry and submarines (it was suggested that these projects could be supported through the use of shared testing facilities). Consideration was also given to the supply of 'complete weapons systems for the United Kingdom with custody retention in United States hands as necessary and with assurance of use only as jointly determined by the two countries'; but as the report noted, everything still had to be 'fully blueprinted'.[453] Macmillan was nevertheless able to write in his diary that 'The job is done - and I must frankly say better done that I expected'.[454]

From here Britain enjoyed a run of success. The *Declaration of Common Purpose* was published on 25 October, laying down 'understandings' agreed by 'trusted friends of many years'. Interdependence was now said to be a basic fact, with 'the concept of national self-sufficiency' deemed 'out of date'. Moves towards the principle of collective security were recommended, as was the amendment of the McMahon Act to make 'close and fruitful collaboration of scientists and engineers' possible. Disarmament was raised, but in the event of its failure the two nations considered their nuclear arsenals to be held in 'trust for the defense of the free world' until a 'just and lasting' peace could be achieved through the collapse of 'Communist despotism'.[455] Macmillan defended this on 5 November, using the Debate on the Address to tell the House of Commons that:

> Since the war we in this country, as well as most of our friends and allies, have recognised that in modern conditions we are, to a large extent,

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[452] *Ibid.*
[453] 'Report to the President and Prime Minister from Lewis Strauss, Donald Quarles, Sir Edwin Plowden and Sir Richard Powell: 25 October, 1957'; PREM 11/2329.
[454] 25 October, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 68.
[455] 'Declaration of Common Purpose by the President and the Prime Minister of the United Kingdom: 25 October, 1957' reproduced in Eisenhower, D. D., *Public Papers of the Presidents of the United States: Dwight D. Eisenhower - Containing the Public Messages, Speeches, and Statements of the President, January 1 to December 31, 1957* (Washington: United States Government Printing Office, 1958), pp. 768-73.

> dependent on the United States and our other allies for our defence - that is, our defence in global war against Communism, our resistance to Communism. However - let us be frank about it - there has been some doubt about the position of the United States.[456]

These doubts related to whether the United States would 'relapse into isolationism or decide to go it alone' once the Soviet Union presented a credible direct threat to its mainland, and Macmillan claimed interdependence brought an end to these doubts.[457] He even began to talk about the agreement as a 'first beginning' for 'the effective union of the free world', into which nations would pour 'an even more significant contribution of their national sovereignty to the common cause than hitherto'.[458] This heady rhetoric was toned down the following week when Macmillan said that 'Any agreement or treaty in a sense impinges on national sovereignty', and moved to stress that interdependence was a matter 'not of fundamental change, but of degree', modestly comparing it to the foundation of NATO.[459] Macmillan may have simply got ahead of himself in the first debate, or the moderation of his enthusiasm in the interim may have owed something to the explosion of Britain's first true megaton weapon on 8 November. Either way, this apparent conflict between interdependence and independence became a major issue in defence policy-making during the remainder of Sandys' period of involvement. Whilst he was quick to embrace its practicalities, Sandys remained consistent with his well-established policy preferences, demonstrating that possession of a credible delivery system took precedence over targeting arrangements in his definition of what it meant to possess an independent nuclear capability.

Thor and the Independent Nuclear Capability

In early 1956 the United States began to develop an intermediate-range ballistic missile that was capable of hitting targets within the Soviet Union from European bases. This was Thor, and for all the testing problems it experienced throughout 1957, it was

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[456] Hansard HC vol 577 col 37 (5 November, 1957); this was coincidentally the day when news reached Macmillan that the Soviet Union had launched a dog into space aboard Sputnik 2. He noted the 'alarm and despondency' that this had created in the United States, whilst complaining that the 'English people, with characteristic frivolity, are much more exercised about the "little dawg" than about the terrifying nature of these new developments in "rocketry"'; 5 November, 1957; Catterall, *The Macmillan Diaries: 1957-66*, pp. 69-70.
[457] Hansard HC vol 577 col 37 (5 November, 1957).
[458] Hansard HC vol 577 col 39 (5 November, 1957).
[459] Hansard HC vol 579 cols 1262-63 (11 November, 1957).

expected to be a useable weapon by the time Sandys had implemented his new strategic concept. Indeed, it was the prospect of acquiring these weapons that had allowed Macmillan to remain ambiguous about the need 'to produce ourselves a medium-range ballistic rocket' in the February Defence Committee meeting where Sandys' strategic concept had been approved. This was a concern for Sandys, but, whatever the plans for Blue Streak in 1957, it was certainly not going to be operational in the near future, which meant that a temporary stop-gap had to be considered. Sandys was happy with such an arrangement. If unmanned weaponry was to replace manned bomber aircraft, it made sense to supplement the V-bomber force with American-made ballistic missiles until - and only until - the British-built weapon could be introduced to replace them all.

Macmillan had reached an agreement regarding Thor with Eisenhower at the Bermuda Conference (21-23 March 1957). He had invested a lot into these discussions, knowing that he had to repair Anglo-American relations after the Suez disaster, but also because he believed that if he could not make Eisenhower 'come round', then 'Europe is finished'.[460] Macmillan put great faith in the value of summit diplomacy as a result of his experiences in the Second World War, and he knew Eisenhower well, having worked closely with him in the Mediterranean, considering him to be a personal friend.[461] Bermuda was a genuine success for Macmillan. He was able to make it clear just how Britain had felt let down by the United States over Suez, whilst at the same time making his commitment to fighting the Cold War clear by describing communism as 'evil' during a well-received speech made to open the conference.[462] Because of his success, he was able to tell Butler, left to run the government back in London, that he detected in Eisenhower a 'genuine desire to forget our differences and to restore our old relationship and cooperation in full measure'.[463] The immediate practical result of this

[460] Macmillan to Eden: 17 February, 1957 cited in Horne, *Macmillan: Volume II*, p. 22.
[461] Richard Aldous has written that Casablanca showed Macmillan 'the stage on which he wanted to perform', and that 'The idea of emperors meeting to solve the problems of the world would later come to dominate his thoughts on diplomacy'; Aldous, R., *Macmillan, Eisenhower and the Cold War* (Dublin: Four Courts Press, 2005), pp. 16-17; in a contemporary account of Macmillan's preference for this kind of diplomacy, Henry Fairlie said of Macmillan 'He believes that he can deal with any difficult situation if only he is able to establish some sort of personal relationship with those who are involved in it'; Fairlie, H. 'From Walpole to Macmillan' in *Encounter*, No. 89 (February, 1961), p. 60; the official report of the conference said that Macmillan and Eisenhower 'have conducted their discussions with the freedom and frankness permitted to old friends in a world of growing inter-dependence'; 'Final Communiqué from the Bermuda Conference: 25 March, 1957'; PREM 11/1837.
[462] He had originally planned to compare Gamal Abdel Nasser, the Egyptian leader, to Mussolini ('It's like Mussolini - he started, in a way, as an Italian patriot. He ended up a[s] Hitler's stooge'), but there was no mention of this line in reports of his opening statement; 'Notes for Bermuda speech: 21 March, 1957'; PREM 11/1836; Minutes of the First Meeting at Bermuda: 21 March (10:30 am); PREM 11/1838.
[463] Macmillan to Butler: 22 March, 1957 cited in Horne, *Macmillan: Volume II*, p. 25.

was that a number of agreements were reached regarding defence collaboration including a tentative arrangement to co-ordinate strike plans between the respective bomber forces of the two nations; an agreement to increase intelligence co-operation; and an informal decision that Britain would take a more direct role in gathering intelligence by hosting U-2 reconnaissance aircraft. More importantly, the proposals mooted during Sandys' 1954 mission as the Minister of Supply were confirmed when Eisenhower agreed to store American nuclear warheads in RAF bases in case of emergency, and also to modify British Canberra bombers to enable their use. Macmillan wished to draw attention to this particular agreement as definitive proof that he had successfully restored Anglo-American relations, but Eisenhower urged secrecy so as not to encourage other allies to expect similar assistance.[464]

One important agreement that Macmillan was able to broadcast was the agreement in principle for Thor to be based in Britain, justifying it in the House of Commons by saying that Thor would be available 'some years before those [missiles] which we have been developing for ourselves'.[465] Pre-empting concerns about the precise amount of control Britain had over Thor, Macmillan defended the agreement by comparing the missiles to the aircraft of Strategic Air Command based in Britain, which were 'under the sole control of the Government of the United States'.[466] The fact that this agreement had been made under a Labour government meant that Macmillan was able to compare his new agreement favourably. Furthermore, it added weight to the project to develop British warheads. This was because, whilst the missiles themselves were to be fully owned, manned, and serviced by the British, they still carried warheads subject to United States control under the stipulations of the McMahon Act, placing the system under dual control. Macmillan was therefore able to state that an element of foreign control over Thor would last 'So long as we rely upon the American warheads, and only so long'.[467] Despite the assurances of the Prime Minister, the details of this agreement sparked some controversy, with questions being asked about why 'we are entrusted by an ally with a weapon, but are not to be trusted with the ammunition'.[468] Macmillan was content that his speech had seen 'the Tories (temporarily) united and the Socialists split

[464] Macmillan to Eisenhower: 23 March, 1957; PREM 11/1836.
[465] Hansard HC vol 568 col 55 (1 April, 1957).
[466] *Ibid.*
[467] Hansard HC vol 568 col 56 (1 April, 1957).
[468] *Ibid.*

in two', and the White Paper was able to formalise the Government's intention to secure these American-made missiles.[469]

This short-term political victory may have pleased Macmillan, but similar concerns had already been raised by the Air Ministry. Taking their lead from Sandys' original 22 February briefing that bomber aircraft would be replaced 'in due course' by ballistic missiles, it was pointed out that Blue Streak being abandoned or merely over-running its tight development schedule would leave Britain to either base its nuclear deterrent capability on 'obsolete' weapons, or become completely dependent on 'such weapons as the U.S.A. chooses to supply'.[470] Consequently, since it was assumed that these weapons would come with similar political restrictions to Thor, whilst the Air Ministry was still supportive of the government's intentions, they made it clear that they could not support obtaining Thor 'at any price', advising the government to extract the most favourable terms on something that was 'useless' without European launching sites.[471] Thor was put to one side for the remainder of 1957 as Sandys sought to implement his strategic concept, but in early 1958 formal agreements were drafted in the lead up to the publication of the latest White Paper. Now the Chiefs of Staff waded in, voicing their concerns that SACEUR might gain control over Thor and attempt to use it in support of any tactical operations.[472] Boyle in particular had developed serious doubts about Thor, and warnings reached the government at the end of January that Thor was not only unsatisfactory in terms of what Britain required, but subject to a control arrangement 'which in our view is designed to serve American ends more than British'.[473]

It was this control arrangement which has seen Thor become intertwined with Sandys' take on interdependence, and which has allowed historians to argue that he prioritised securing Anglo-American friendship over his long-stated belief that Britain should possess an independent nuclear capability, with Navias referring to the 'paradoxical

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[469] 1 April, 1957; Catterall, *The Macmillan Diaries: 1957-66*, p. 26.
[470] Maurice Dean to Ward: 4 March, 1957; AIR 19/856.
[471] Record of Air Ministry meeting: 12 March, 1957; AIR 19/856; it was also felt in some quarters that taking Thor on would have increased the pressure on Blue Streak to justify itself; Baylis, *Ambiguity and Deterrence*, pp. 252-53.
[472] 'Control of Immediate Range Ballistic Missiles: Memorandum by the Chiefs of Staff, 22 January, 1957'; DEFE 5/81, C.O.S. (58) 12; see also: DEFE 4/103, C.O.S. (58) 6th Meeting: 17 January, 1957.
[473] They recommended that Thor only be accepted on a similar basis to the American bomber aircraft based in Britain, in so far as they would be 'financed, manned and operated by the U.S.A.', but with an agreement that gave Britain 'joint agreement' on their use; 'American Immediate Range Ballistic Missiles: Memorandum by the Chiefs of Staff, 29 January, 1957'; DEFE 5/81, C.O.S. (58) 23; see also: DEFE 4/103, C.O.S. (58) 7th Meeting: 21 January, 1958.

objectives of an emphasis on maintaining an "independent" nuclear force and the recognition that the major thrust of policy must be directed towards a deterrent posture in conjunction with the United States'.[474] This has been given particular attention in relation to Sandys' brief period of enthusiasm for Thor over the summer of 1958, when he flirted with the idea of an independent version (without political conditions and topped with a British-built warhead) as an alternative to Blue Streak. Baylis describes this as characteristic of the 'dilemma over interdependence and independence' while Clark sees the period as being marked by Sandys' 'wavering' in relation to his otherwise consistent championing of Blue Streak.[475] Navias goes further, using this moment as proof that 'total independence... was never his (Sandys') primary concern'.[476] It is worth ascertaining precisely what is meant by independence here, and Navias offers two main alternatives and a 'third approach':

> (1) 'unilateral independence' whereby Britain would seek to deter the Soviet Union independently of the United States through the maintenance of a capability to deliver unacceptable damage to the USSR in the form of nuclear strikes against her cities; and (2) 'independence in concert', whereby Britain would maintain the capability pre-emptively (or possible even under attack) to destroy her own Soviet targets which were regarded as specifically threatening to the UK in the context of a joint allied attack.[477]

The 'third approach' was one where Britain maintained its nuclear capability 'to influence the United States and reinforce the United Kingdom's world power status' whilst planning on the basis of 'trust in the capabilities of SAC (Strategic Air Command) for dealing in the future with an ever-expanding Soviet target set'. This approach, he claims, was favoured by the various Ministers of Defence due to its 'greater tolerance for economies and cuts'.[478] This approach is not, however, satisfactory because even when discounting the fact that Blue Streak, by being heavily-dependent on American technology, would have fallen short of allowing Britain to pursue a policy of

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[474] Navias, *Nuclear Weapons and British Strategic Planning*, p. 202.
[475] Baylis, *Ambiguity and Deterrence*, p. 257; Clark, I., *Nuclear Diplomacy and the Special Relationship: Britain's Deterrent and America, 1957-1962* (Oxford: Clarendon Press, 1994), p. 164 and pp. 169-72.
[476] Navias, *Nuclear Weapons and British Strategic Planning*, p. 219.
[477] Throughout the text 'unilateral independence' is alternatively referred to as 'true independence' and 'total independence'; *Ibid.*, pp. 130-31.
[478] *Ibid.*, p. 131; Groom writes that 'The prime British aim was for influence through co-operation, and not insurance through independence, although the claim of independence was not without its uses'; Groom, *British Thinking About Nuclear Weapons*, p. 209.

'unilateral independence' under its strictest definition, attempts to reconcile Sandys with these rigid definitions in order to prove he was never committed to 'total independence' are problematic. Instead, we need to understand this period in the context of the arguments made in this thesis, that Sandys' actions make sense when they are seen in the light of his long-standing and complex world-view.

Sandys and Nuclear Independence

In June 1953 Sandys had written that Britain's status as a leading nation depended 'upon our ability to make a military contribution of sufficient importance to assure us a say, second only to America's... in the shaping of Allied strategy'. He knew that the United States would 'undertake a large proportion of the atomic offensive against Russia', but remained determined that Britain play 'some appreciable part' in their bombing strategy. He also argued that Britain had to remain capable of 'undertaking special missions, such as the precision bombing of vital installations', in particular 'the airfields from which the Soviet air attack on Britain is being launched'. His understanding of the future, derived from his interpretation of the past, led Sandys to conclude that such an air attack would be decisive. Consequently, it would be 'unthinkable' to leave the task to any other nation, even the United States.[479] Sandys was, therefore, arguing for interdependence as a means of ensuring overall British defence and the capacity for the British to focus on what he perceived to be critical missions. In his follow-up November memorandum this reliance on the United States was further emphasised:

> [A]n independent defence system is a luxury we can no longer afford. Our existence as a free nation is already entirely dependent upon the deterrent effect of America's strategic air force and her stockpile of atomic bombs, and it is only in alliance with America that we could hope to survive an attack by Russia.[480]

This early thrust towards a policy of interdependence was reinforced four years later by the White Paper's claim that the defence of Britain was only possible 'as part of the collective defence of the free world'. The White Paper said that Britain had to possess

[479] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1.
[480] 'Defence Policy and Expenditure: 20 November, 1953'; DSND 4/1/1.

'an appreciable element of nuclear deterrent power of her own', but admitted that 'The free world is to-day mainly dependent for its protection upon the nuclear capacity of the United States'.[481] This would all represent an unequivocal endorsement on Sandys' part of Navias' definition of 'independence in concert'. On the other hand, Sandys had also asked rhetorically during the debate on the White Paper whether the United States would remain a reliable ally once the Soviet Union had acquired the ability to strike directly at their cities. In doing so he also appeared to define 'an appreciable element of nuclear power' as something capable of deterring the Soviet Union on its own.[482] This was more in fitting with 'unilateral independence'. To further cloud the issue, Sandys' statements on 'the shaping of Allied strategy' and on American co-operation could be interpreted as Navias' 'third approach'; but at the same time his desire for Britain to possess a genuine nuclear threat, rather than to maintain a status symbol or a bargaining tool, would move him away from what reads like a primarily political definition.

Despite the Air Ministry's concerns, Sandys supported Thor, and in February he submitted a memorandum to the Cabinet detailing the precise logistical points. These were that the United States would provide the missiles and train British airmen to use them, and that Britain would pay for their facilities and maintenance. The weapons would remain under joint control, as the McMahon Act insisted that the warheads remained 'in American custody'. This might well have represented a 'valuable addition' to the Western deterrent, but Sandys added a note of caution, reminding the Cabinet that Thor 'cannot, of course, be considered as an element of independent British nuclear power'.[483] In light of what Macmillan had said the previous July about how an 'independent deterrent' was vital for a nation seeking to remain a nuclear power, this was an important point, and questions were raised in Cabinet about the precise nature of control. Drafts of the agreement were felt by some to imply that the Americans could launch them without deferring to Britain if a NATO member was attacked, as loose wording could be interpreted as having placed the missiles under the command of SACEUR.[484] Sandys recognised these issues, and when he was questioned in the House of Commons as to whether constructing British warheads for Thor would make them completely independent, as Macmillan had intimated the previous April, he confirmed

[481] *Defence: Outline of Future Policy*; DSND 6/52.
[482] Hansard HC vol 568 cols 1760-61 (16 April, 1957).
[483] 'Intermediate-range Ballistic Missiles: Memorandum by the Minister of Defence, 11 February'; CAB 129/91 C (58) 40.
[484] CAB 128/32 CC (58) 16: 12 February, 1958; CAB 128/32 CC (58) 17: 18 February, 1958.

the temporary nature of Thor when he replied with a definite reference to Blue Streak, claiming that the government had no plans to do this because 'We are concentrating our efforts on developing an all-British rocket of a more advanced type'.[485]

The United States had originally hoped to begin the deployment of Thor in July, but failures in testing slowed progress. Boyle used his information on these problems to predict that it was 'completely unrealistic' to expect Thor to be in any 'acceptable operational state' by December, despite what the government may have been promised.[486] This brought British nuclear policy back into discussion, and in a series of Defence Committee meetings during the summer of 1958 there was general agreement that the purposes of the British nuclear capability was to retain influence on the United States and in world affairs, but also to 'make a definite, though limited, contribution to the total nuclear strength of the West'. The need for this 'definite' contribution was to ensure that if 'the development of inter-continental ballistic missiles' (it is worth noting the focus on missiles rather than bombers) forced the United States to withdraw from Europe, then Britain would still have had enough retaliatory power to deter the Soviet Union from overrunning Western Europe and to 'present the United States with a *fait accompli* before any effective retaliatory action could be taken'. In addition to this, an independent nuclear capability would have allowed for attacks on those targets 'of immediate importance to us'. It was by now accepted that only a 'stock of ballistic missiles' would provide Britain with an effective nuclear capability beyond the lifespan of the V-bombers, but it was suggested that if complete weapon systems could be purchased 'without any restriction on their use', then the development of a British-built weapon could be accorded lower priority.[487]

When Sandys had his say the following week, he seemed to be more convinced by Thor than he had been previously. Having entered a period of doubt regarding the Blue Streak programme in its existing form, he had come to see Thor as a possible stop-gap provided British warheads could guarantee its independence. If the missiles could be procured 'without restrictions on their use', Sandys believed that this would solve 'our

[485] Hansard HC vol 583 col 32 (24 February, 1958); *Supply of Ballistic Missiles by the United States to the United Kingdom* (London: HMSO, 1958) and its 'Unpublished Understandings' can be found in AIR 19/943.
[486] DEFE 4/107, C.O.S. (58) 45th Meeting: 20 May, 1958.
[487] CAB 131/19, D (58) 15th Meeting: 25 July, 1958.

interim requirements' and allow Britain to reduce expenditure on Blue Streak.[488] It is this moment which has been used to question Sandys' commitment to an independent nuclear capability. It is true that Sandys had always supported Blue Streak; but only because it promised to be the most suitable weapon in terms of its operational and technical independence, as well as in its ability to strike at the Soviet Union. This would be supported by his subsequent point in the aforementioned Defence Committee meeting that if Blue Streak was to be sidelined, Britain 'should seek to collaborate with the United States in a joint project for a more advanced type of ballistic missile' capable of succeeding both Thor and the V-bombers.[489] This is why, when he suggested in a September memorandum that Blue Streak could be cancelled and that Britain should utilise an independent variation of Thor, he made it clear to the Defence Committee that this was in order for a 'better weapon' than Blue Streak to be developed, with the idea being that increased co-operation with Europe and new information from America would make this possible.[490] It is also why, in a round of Washington discussions with the United States Secretary of Defense in late September, he explicitly referred to an independent version of Thor as an 'interim measure' between the V-bombers becoming ineffective and a 'more advanced' successor to Blue Streak being developed.[491] In a later meeting he added to this by saying:

> Britain regarded them (Thor) as being an extension of the independent British medium bomber force, which, together with American Strategic Air Command, had the task of strategic bombing of targets deep inside Russia... Any missiles so acquired must be 'without strings,' so that they could be used independently by Britain, if she so wished, in the same way as the medium bomber force.[492]

For these reasons, Sandys made it clear that 'the British Government could not agree that any element of the independent British deterrent should be subordinated to

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[488] CAB 131/19, D (58) 16th Meeting: 1 August, 1958.
[489] The Committee agreed that such a programme 'would constitute a further concrete example of interdependence'; *Ibid.*
[490] 'Ballistic Rockets: Memorandum by the Minister of Defence, 8 September, 1958'; CAB 131/20, D (58) 47; CAB 131/19, D (58) 18th Meeting: 10 September, 1958.
[491] 'General Introductory Discussion: 22 September, 1958' in 'Record of Meetings held at the Pentagon and State Department, Washington, D. C.: September 22-25, 1958'; DSND 6/37.
[492] 'General Review of Policy - Procurement of Thor IRBMs; Future Deployment of British Forces and Nuclear Sufficiency: 24 September, 1958' in *Ibid.*

SACEUR'.[493] When it became clear by November that technical advances 'could readily be incorporated' into the existing Blue Streak programme, and that European enthusiasm for a joint missile project was expected to be limited, Sandys reverted to his belief that 'if we wish to maintain an independent British contribution to the nuclear deterrent... we must proceed with the development of Blue Streak'.[494] There was clearly wavering in relation to the effectiveness of Blue Streak, but Sandys' belief that only unmanned weaponry could provide a sustainable means of delivering nuclear warheads remained absolutely consistent, and central to his concept of nuclear independence. This is supported by the 5 November Defence Committee meeting in which he said that 'he could envisage circumstances in which the threat that we would use our nuclear deterrent independently of the United States would be the only method of preserving peace'. In the context of a discussion where the Chancellor had suggested abandoning Blue Streak 'even if this meant that at some time in the 1960's [*sic*] we should cease to have an independent deterrent', this is an unequivocal defence of maintaining the capability to pursue a policy of 'unilateral independence' albeit whilst expecting such an eventuality to remain unlikely.[495]

Sandys' return to Blue Streak was completed when another November memorandum thoroughly demolished his earlier advocacy of using an independent variant of Thor as even a temporary replacement. Thor, he said, would be 'unusable after about 1968', offering only 'marginal' benefits in light of plans to extend the lives of the V-bomber force by equipping them with air-to-surface missiles. Sandys also wrote that Thor had 'no reserve of power or carrying capacity to embody technical improvements, such as devices to counter anti-missile defences', and would prove 'very vulnerable to rocket attack' owing to its deployment above ground, which meant it compared unfavourably with Blue Streak which was expected to be based in hardened underground silos. The most important consideration, however, was that using Thor to justify pausing Blue Streak whilst research was made into a superior weapon would end any hopes of

[493] *Ibid.*
[494] 'Ballistic Rockets: Memorandum by the Minister of Defence, 3 November, 1958'; CAB 131/20, D (58) 57.
[495] Sandys said that 'if an independent British contribution to the nuclear deterrent were to be maintained after the mid-1960's, the intermediate-range ballistic rocket BLUE STREAK should continue to be developed with the aim of starting deployment of these weapons in 1965'; CAB 131/19, D (58) 24th Meeting: 5 November, 1958.

'completing the deployment of a British made rocket before the mid-1970's, i.e. several years after the V-Bomber force had ceased to be effective'.[496]

In spite of its downsides, Thor represented a worthwhile investment for Britain in Sandys' eyes. He held no illusions about its drawbacks, but its positives outweighed its negatives from his perspective. The United States might have maintained unfortunate amounts of control over it, but this was balanced by the fact that it initially promised to be a more successful delivery system than the V-bomber force which, whilst under independent British control, was less likely to penetrate Soviet air defences. Sandys accepted this lack of genuine independence in Thor, but it cannot be used as evidence of him having had no real commitment to independence. He saw Thor as a temporary solution only, heavily-dependent on the condition that its adoption did not allow the government to abandon the British-built ballistic missile that could guarantee genuine long-term independence. In this sense any ambiguity over definitions of independence on Sandys' part were in relation to having to accept this short-term political compromise that conflicted with certain aspects of his established policy preferences.

Where Navias uses the uncertainty that momentarily came to surround Blue Streak as evidence of Sandys having had no interest in an independent nuclear capability, his analysis is restricted by overly-rigid definitions of independence presenting a false dichotomy. He also appears to view Blue Streak with the benefits of hindsight. We now know that Blue Streak represented Britain's last shot at developing for itself an independent nuclear capability, but Sandys was clearly looking beyond Blue Streak at this point, explicitly connecting his willingness to sideline the project with the promise that Britain's long-term nuclear independence be secured by a superior weapon. Baylis has written that whilst interdependence with the United States was the Government's preferred strategy, 'considerable uncertainty existed amongst political and military leaders over the reliability of the United States in the rapidly changing strategic environment of the late 1950s', giving rise to 'contradictory trends in British nuclear strategy'.[497] This would go some way towards explaining Sandys' various statements, and Baylis' contention that historians have tended to underestimate 'the genuine interests

[496] 'Ballistic Rockets: Memorandum by the Minister of Defence, 16 November, 1958'; CAB 131/20, D (58) 63.
[497] Baylis, *Ambiguity and Deterrence*, p. 242.

in some quarters in more independence', which he believes are best illustrated in the debates that took place over Thor, would certainly be applicable to Sandys.

However, this also has to be considered alongside the notion that Sandys consistently attempted to adhere to an established set of policy preferences. Despite having to meet Macmillan half-way on Thor, everything had been considered with Blue Streak (or its successor) and the truly independent qualities it promised providing the intellectual framework to these discussions. In the same way that his strategic concept flowed from his belief that unmanned weaponry would dominate future warfare, Sandys' concept of nuclear independence was based solely on whether Britain would have full control of an effective nuclear strike weapon - that is to say a stock of ballistic missiles. For Sandys, provided Britain controlled its ballistic missiles, it possessed a truly independent nuclear capability. This is the fixed point of reference from which his personal definition of independence is best understood. That the United States was open to a joint targeting arrangement was helpful, and an allied construction project would have had its advantages; but as long as these partnerships did not place a theoretical block on the operational independence of whatever weapons that Britain might have gained (in the way that joint control arrangements had), then Sandys would have considered the British nuclear capability to have been independent. What it was aimed at, and who it was aimed with, were secondary concerns. Unmanned weapons were such a threat in Sandys' mind that even if the United States pulled out of any joint targeting strategy, what was left would have still represented a significant threat to the Soviet Union (even at the point of cancellation the plan was to have [at least] sixty Blue Streak missiles based in secure underground facilities). This is supported by his March 1959 statement that Britain would have enough Blue Streaks 'to make anyone who is planning to attack us think again'.[498]

Thor was deployed in Britain from July 1959 onwards, and although successful test launches had been conducted, it was still not fully operational by the time Sandys had left the Ministry of Defence.[499] Overall it might be said that whilst assessing Sandys' contribution to the policy-making process relating to Thor can go some way towards

[498] Transcript of Sandys' 12 March 1959 appearance on ITV's 'This Week'; DSND 6/22.
[499] The Government became so desperate to claim that it was an operational weapon that Harold Watkinson, Sandys' successor as Minister of Defence, considered the argument that 'as with a bomber aircraft not loaded with bombs, THOR was operational if it was on the launching pad ready to go'. The fact it lacked a warhead, and thus a nuclear capability, was apparently irrelevant; 'The Operational Capability of Thor: 3 November, 1959'; AIR 19/1069.

proving his commitment to 'total independence', at the same time its adoption did not prove particularly testing to Sandys' established policy preferences. Once Macmillan had moved towards the need for an independent weapon system, Thor came with relatively little risk, both financially and in relation to its effects on Blue Streak entering service. It was available, and it soon became apparent that it could not be considered a serious long-term alternative to a British-built ballistic missile, particularly as its eventual deployment would prove difficult. This can be held in contrast to Polaris, which proved a much more troublesome prospect for Sandys.

The Move to Polaris

The previous chapter mentioned that White Paper had contained little in the way of Sandys' true thoughts about the future of the Navy; but this was not an indefinite reprieve. When Sandys arrived at the Ministry of Defence, McGrigor wrote to Mountbatten to warn him that his new minister had little regard for the Navy 'as everything will be finally decided by the H-bomb', and Mountbatten expected him to 'make my fight for the Navy difficult'.[500] It was later said that Mountbatten had to persuade Sandys 'once a month' about the value of aircraft carriers, which he did so by entertaining him at Broadlands, his lavish country residence.[501] In mid-February 1957, Sandys lived up to his billing when he invited the Chiefs of Staff to pick up where the Radical Review had left off and consider the future of naval aviation. Their response was to refer to the Fleet Air Arm as 'the most flexible and valuable' part of the Navy, and say that aircraft carriers 'should be the last [ships] to be reduced'. The report touched on familiar defences, listing the need to maintain cohesion within NATO alongside 'prestige value' as worthwhile reasons to maintain aircraft carriers.[502] Sandys accepted this, and his 22 February plan for a 'considerably reduced fleet' explained that this 'would be composed basically of 3 Carrier Task Groups'.[503] This idea was developed in the first draft of the White Paper, which said that aircraft carriers would become increasingly important as Britain reduced its number of permanent bases overseas, and was carried over to the finished product which referred to them as 'in

[500] Philip Ziegler writes that Mountbatten came to possess 'grudging admiration and even affection' for Sandys, citing their shared views on the future of the defence Establishment and their membership of the Magic Circle as having led to 'a real *recherché* bond'; Ziegler, P., *Mountbatten: The Official Biography* (London: Collins, 1985), p. 549-60.
[501] Way's contributions to 'Defence Turning Point', pp. 31-32; see also: Ziegler, *Mountbatten*, pp. 553-54.
[502] 'The Fleet Air Arm: Memorandum by the Chiefs of Staff, 19 February, 1957'; DEFE 5/73, C.O.S. (57) 44.
[503] 'Review of Defence Plans: Note by the Minister of Defence, 22 February, 1957'; AIR 2/14712.

effect a mobile air station'.[504] This softening of Sandys' previous views appears to have instilled a certain amount of confidence in the Navy, and the Admiralty once again tried to argue that the V-bomber force received too many resources, claiming that they could no longer support them 'having the first call on Defence Votes'.[505]

The Navy may have saved its aircraft carriers, but Sandys still doubted those heavy ships that had escaped the Radical Review. The White Paper had said that 'the number of large ships will be restricted to a minimum', and it was unfortunate for Sandys that, having attacked cruisers in his Radical Review recommendations, construction had then began on three of them in one of Macmillan's first acts as Minister of Defence.[506] These were the *Tiger* class cruisers, which were now so close to being completed that Sandys had little option but to accept them. This was in spite of the fact that they were not particularly modern, as their construction had actually started during the Second World War, only for their completion to be delayed by post-war austerity measures and previous defence reviews. In November Sandys wrote a memorandum for the Defence Committee on the 'Role and Composition of the Navy' that said that one of these cruisers could be banished East of Suez, where 'limited war is most likely to occur' and where a 'balanced all-purpose naval force' was actually needed. This was held in contrast to the Mediterranean and Atlantic, where the Navy was expected to operate within NATO, reducing the need for balanced forces. Here Sandys returned to the idea of naval power being concentrated on anti-submarine operations, which provided a use for the aircraft carriers and the N.A. 39s he had tried to abolish with his Radical Review proposals.[507]

Sandys' compromise was not enough for the Navy. Mountbatten accepted most of what Sandys had in mind, but warned against 'arbitrary ruling[s] that naval forces were artificially restricted either to one role or one geographical area'. Mountbatten could not increase manpower, but he stressed the need for 'well-found ships and modern equipment' as well as flexibility of action. This was based on the idea dual deterrence,

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[504] 'Defence White Paper: Draft B, 13 March, 1957'; ADM 205/114; Sandys' personal copy of *Defence: Outline of Future Policy*; DSND 6/52.
[505] 'Admiralty views on the V-Bomber Force', note by the Admiralty circulated by Sandys on 29 July, 1957; CAB 131/18 D. (57) 18.
[506] Sandys' personal copy of *Defence: Outline of Future Policy*; DSND 6/52; Grove writes that as Minister of Defence Macmillan supported the Navy in a memorandum 'that could have come from the Admiralty itself'; Grove, *Vanguard to Trident*, p. 114.
[507] 'Role and Composition of the Navy: Memorandum by the Minister of Defence, 14 November, 1957'; CAB 131/18 D. (57) 28.

dependent not only on the nuclear deterrent, but also on the political and military cohesion of NATO. Since the Royal Navy was the second biggest navy in NATO, and, therefore, a 'keystone of NATO as [a] deterrent', Mountbatten followed his own logic and described the Navy as a vital component of the deterrent, claiming that undermining it could also undermine NATO. This in turn would lead to NATO's collapse and allow the Russians to dominate Europe 'piecemeal' before turning towards Britain.[508] With such drastically different ideas of what the Navy was for, the Chiefs of Staff were asked to examine the two reports. They sat on the fence, concluding that 'both the First Lord's and the Minister of Defence's proposals accord sufficiently closely with the United Kingdom's strategic requirements to be acceptable', adding that 'the ideal fleet would probably lie about half-way between these proposals'.[509]

There remained a degree of consistency in Sandys' attempts to accommodate his policy preferences with political realities. In his June 1953 memorandum he had argued against aircraft carriers on the basis that shipping could be better protected by land-based aircraft. It was still held to be the case that aircraft were better at sinking submarines and surface ships, but some use now had to be found for the existing aircraft carriers. The logical conclusion was to integrate them into the strategy Sandys had brought over from the Ministry of Supply and risk '£40 million of capital in a fleet carrier that can be sunk with one bomb', as the Air Ministry had previously put it. Finding a role for aircraft carriers showed that when required, Sandys was capable of moderating his policy preferences in light of his new responsibilities. Where he was previously able to conceive an entirely new defence outlook as the Minister of Supply, at the Ministry of Defence he was constrained by the kind of political realities that made scrapping significant parts of the fleet extremely difficult. However, as with Thor, this sort of compromise position was only possible so long as Sandys' core strategic concept, which was by this point wholly bound up with Blue Streak (or its successor), was not threatened. When the Navy began to propose their own alternatives to Blue Streak, this ability to compromise was challenged.

The Admiralty and Setting the Agenda

[508] 'Role of the Navy: Memorandum by the First Sea Lord, 15 November, 1957'; CAB 131/18 D. (57) 29.
[509] 'Role and Composition of the Navy: Memorandum by the Chiefs of Staff, 4 December, 1957'; DEFE 5/80, C.O.S. (57) 263.

The Chiefs of Staff were no longer willing to defend the Navy as they had during the Radical Review, and, with Mountbatten fighting a running battle to secure the Navy's future, one solution was to increase its importance to Britain's nuclear deterrent. The Polaris programme was still in its infancy in 1957, and Grove has written that the Admiralty initially showed 'distinctly limited enthusiasm' towards it; but having been briefed on its development by friends in the United States Navy, Mountbatten proposed it as an alternative to Thor in May.[510] Sandys' Blue Streak-friendly allies at the Ministry of Supply immediately moved to criticise Polaris, describing hopes that it would be operational by 1965 as 'optimistic even by American standards', questioning the size of its warhead, and saying that any British project would be 'similar in magnitude to Blue Streak'.[511] This foray put the issue to one side for a while, but when Macmillan asked the Admiralty about the 'atomic submarine' in August, by which he simply meant the potential uses of a nuclear-powered vessel within existing naval strategy, Selkirk used this opportunity to impress upon him their potential to take on an even greater responsibility.[512] His reply to Macmillan described the move to nuclear-powered naval vessels as being as revolutionary as 'the transition from sail to steam', and urged him to find enough money for Britain to keep pace with Soviet developments. Further, he told Macmillan that the United States was looking to equip its nuclear submarines with ballistic missiles, and that they regarded this as 'an essential development in the nuclear deterrent'. The key move that Selkirk made was to emphasise that using submarines as nuclear missile platforms meant 'giving high mobility to a weapon which is practically undetectable and almost invulnerable'. The argument was that submarine-launched ballistic missiles could represented a genuine alternative to their land-based counterparts.[513]

The Admiralty was able to confirm these opinions in October when they were given a glimpse into what USS *Nautilus*, the world's first nuclear-powered submarine, was capable of. *Nautilus* had been launched in early-1954 and put to sea the following year,

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[510] Mountbatten was told about Polaris in November 1955 by Arleigh Burke, the Chief of Naval Operations in the United States Navy. Mountbatten recalled that Burke had tried to talk the Air Force into converting Thor to run on solid fuel so that it could be launched from submarines. When they refused, Mountbatten offered him the support of the Royal Navy, and it was agreed that a 'handpicked RN officer, with missile experience' would be sent out to become Mountbatten's special representative on the Polaris project; Grove, *Vanguard to Trident*, pp. 233-34; Bundy however writes that Burke had tried to go into partnership with the United States Army 'to prevent an air force monopoly' before breaking away from their Jupiter project in favour of a smaller solid fuel missile; Bundy, *Danger and Survival*, pp. 327-28.
[511] Aubrey Jones to Sandys: 29 May, 1957; AIR 19/942.
[512] Macmillan to Selkirk: 7 August, 1957; DEFE 7/2162.
[513] Selkirk to Macmillan: 12 September, 1957; DEFE 7/2162.

and it had soon became apparent in testing that much of what was understood about anti-submarine warfare would have to be re-written. In two naval exercises, one organised by NATO and another by the Royal Navy during which *Nautilus* was placed under British command, this became clear. It was reported within the Navy that 'she can command the freedom of the seas whenever she chooses to take the initiative', and that in previous American exercises she had proven herself a hundred times less likely to be 'killed' than non-nuclear submarines. Within the Navy it was immediately realised that the threat of Soviet nuclear submarines placed renewed focus on exactly what was required to keep the Atlantic lifeline open, thereby serving to throw Sandys' naval plans into question. It was also noted that:

> As an instrument of surprise attack against targets (sea or land) the nuclear submarine had potentialities which are unsurpassed whilst the problems which it poses to the defence are formidable indeed. The American Navy, originally sceptical of its capabilities, now regard the nuclear submarine as an entirely new weapon of war.[514]

Sandys had witnessed the *Nautilus* exercise as Mountbatten's guest, and he was impressed by its performance. Too impressed for Mountbatten's liking, and he wrote to the Commander-in-Chief of the Home Fleet to warn him that because Sandys was 'given to reaching sudden conclusions', there was a 'very real danger' that he would 'decide that the nuclear-propelled submarine has made our present Navy completely obsolete'.[515] This was probably more a case of Mountbatten projecting his own 'sudden conclusions' onto Sandys' modernising zeal, as there is little to suggest that Sandys gave any real consideration to basing the future of the Navy on these vessels.

If Sandys could not be impressed directly, other means had to be utilised for the Admiralty to put their preferences over. This was particularly true in light of the January directive that had increased Sandys' influence over equipment, as well as removing the Service Ministries' ability to lobby Macmillan or the Chancellor directly. Early examples of this can be found in Selkirk's considered approach to putting Polaris on the

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[514] 'Performance of Nuclear Submarine: 30 October, 1957' and 'The Threat of the Nuclear Submarine: 30 October, 1957'; ADM 1/27796.

[515] Macmillan wrote in his diary on 21 June 1957 that 'We do not want this visit. The Americans, untruthfully say (for commercial purposes) that our Calder Hall reactors are not safe. The Admiralty replies by inviting (without a word to me) the US atomic submarine to Plymouth!'; Catterall, *The Macmillan Diaries: 1957-66*, p. 44.

agenda, beginning with his response to an article in *The Times* that described the idea of a naval deterrent as 'a luxury that only the Americans can afford'.[516] Selkirk wrote to the editor of *The Times* to complain that 'all the far-reaching implications' of missile-firing submarines had not been given adequate coverage, and, having educated him as to the benefits of a submarine-launched missile system, Selkirk offered to send a 'full article for publication' prepared by the Admiralty.[517]

This subterfuge can be seen at a more official level in a personal letter of January 1958 that Selkirk sent to Quintin Hogg, making the Admiralty's motivations for following this course clear. Selkirk was 'very anxious to percolate slowly but gradually into the minds of our colleagues' the possibilities of missile-firing submarines, which he believed would be operational by 1961. He said that 'nobody is as yet ready' to properly consider putting the main body of the British deterrent out to sea, and he was worried that the Air Ministry would consider Polaris 'an offensive red herring'. Selkirk was sure that 'by 1967 or so missile sites will be out of this island and at sea'. He wanted to put Polaris in the frame before the government became irreversibly committed to Blue Streak, and sought to enlist Hogg as a 'neutral' supporter.[518] As well as being Selkirk's predecessor as First Lord of the Admiralty, Hogg was the Lord President of the Council, providing him with access to the Cabinet and to Macmillan whilst being outside of the departmental rivalries that existed within the defence policy-making process. Thus when Selkirk suggested that 'at a convenient time you might ask in Cabinet that some of the facts of this development be at least laid before it', he knew that coming from Hogg this initiative would be less likely to 'frighten the Chancellor' than had it come directly from an Admiralty looking for more money.[519]

This indirect approach was coupled with the inflow of information from official sources that the Admiralty could utilise. Edwin Plowden at the United Kingdom Atomic Energy Authority (which oversaw all aspects of British nuclear capabilities, including those relating to the deterrent) was one, and he was able to report to G. A. M. Wilson, the admiral with special responsibilities for nuclear propulsion at the Admiralty (the excellently-named 'Rear Admiral Nuclear Propulsion'), that although Macmillan was unconvinced by the nuclear-powered submarine in relation to existing naval plans, 'not

[516] 'Missiles from Submarines'; *The Times*: 19 November, 1957.
[517] Selkirk to William Haley: 21 November, 1957; ADM 1/27375.
[518] Selkirk to Hogg: 1 January, 1958; ADM 1/27375.
[519] *Ibid.*

enough has been made of the deterrent value of the polaris [*sic*] carrying submarine'.[520] This inter-departmental support was boosted in January 1958 when a delegation from the Royal Aircraft Establishment visited American ballistic missile development installations. With no service affiliation, the delegation was able to present a comprehensive report on American progress across a number of different systems. With particular relevance to British policy, the report claimed that American thinking was moving towards the belief that missiles based underground, as Blue Streak was to be, would still prove vulnerable if the enemy could bring enough explosive power to bear on their launching sites, and that the cost of building silos strong enough to withstand any eventuality would prove 'prohibitive'. [521] The report claimed that 'the only solution to the ultimate maintenance of a useful weapon system lies in a great diversity of launch points', and in a smaller weapon of increased accuracy. Polaris was then explicitly cited as a 'very real technical advance', held in direct contrast to Thor, and given its own detailed section which claimed that Polaris would enter full service in the United States Navy by June 1963.[522]

In the wake of this report the Admiralty began to campaign more openly, setting up a working party under the Vice Chief of the Naval Staff to 'examine various aspects of the employment of POLARIS missiles in submarines'. The working party concluded that Britain would gain 'considerable strategic advantages' with Polaris, whilst also recognising the 'many hurdles' the Admiralty would have to surmount in realising its intentions. Chief amongst these was the 'virtually inevitable' conflict between Polaris and Blue Streak. This conflict was held to be inevitable as the British Polaris system would have to be constructed in Britain 'to avoid the political disadvantage of not having the deterrent completely under U.K. control'. Therefore the working party warned the Admiralty that to pursue Polaris they would have to argue for a 'major revision' of existing deterrence policy.[523] The conflict with Blue Streak was made clear,

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[520] G. A. M. Wilson to Selkirk: 6 January, 1958 (the printed date is 1957, but this has been corrected by hand); ADM 1/27375.

[521] 'These remarks stem largely from the Space Technology Laboratories Inc. (Dr. Simon Ramo) and the U.S. Air Force Ballistic Missile Division. They are not official statements'; 'Technical Notes on the American Ballistic Missile Programme: January, 1958'; AVIA 6/25549.

[522] *Ibid.*

[523] 'POLARIS: Report of Working Party and Proposed Future Action, 27 March, 1958'; ADM 1/28949; the chairman of the working party listed the 'salient points' of the report as follows: 'Dependence on BLUE STREAK will freeze strategy into a shape incapable of adaptation. The ability to employ a different kind of missile... will help to maintain the traditional and well proved British policy of flexible defence preparation, adjustable to all strategic circumstances... There can be no question that the POLARIS submarine, with its flexibility and relative invulnerability, provides a weapon which has significant advantages over the missile fired from fixed sites on land... It is practically invulnerable from

and the report claimed that constructing eight Polaris submarines - even if the missiles had to be bought from the United States - would prove cheaper than Blue Streak, and that a crash British Polaris programme could have its first submarine at sea only a year after Blue Streak was expected to be ready.[524]

The Board of the Admiralty questioned these optimistic projections, but it was nevertheless decided that such 'factors governing the practicality' of the project should not be allowed to obscure the 'overwhelming' strategic advantages of exchanging Blue Streak for Polaris. It was therefore decided that Polaris was to become a 'major naval objective'.[525] Yet, having decided upon this course, the Board urged caution. Expecting 'bitter opposition' from the Air Ministry was one issue, but they also worried that the Admiralty would be given the go-ahead to pursue Polaris without seeing their spending allocation increased. On the other hand 'if time were allowed for the great advantages of POLARIS over BLUE STREAK to sink in', the most 'natural' outcome would be for the Navy to receive Blue Streak's allocation. Thus it was decided that the Admiralty would wait for Macmillan to make further enquiries about Polaris, and when he did they would emphasise the 'greater certainty of control' Polaris offered in order to undermine what had become a contentious issue with Blue Streak - that it was ineffective as a retaliatory weapon system as its preparation time left only a small window in which to properly consider using it.[526]

The Conflict with Blue Streak

In April Sandys asked Selkirk for a paper on the 'future potentialities of rocket weapons launched from submarines' in order to discuss it with the Admiralty, the Air Ministry, the Ministry of Supply, and 'technical experts of the three departments'.[527] Both the Air Ministry and the Ministry of Supply were hostile to Polaris, but there is no suggestion that Sandys had deliberately stacked the odds against the Admiralty in this instance. However, Selkirk's paper, which was basically a summary of what the working

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neutralisation by surprise attack'; 'The Polaris Submarine: Cover note by Chairman of Polaris Working Party'; ADM 1/28949.

[524] *Ibid.*

[525] 'Board Minutes: 27 March, 1958'; ADM 1/28949.

[526] *Ibid.*

[527] Sandys to Selkirk: 3 April, 1958; AVIA 65/1888.

party had previously concluded, was attacked by the Air Ministry.[528] They said Admiralty assumptions were based upon 'unproven American data', and reminded Sandys that the deterrent was not only based on the land-based ballistic missiles used in the Admiralty's comparisons, but also 'aircraft with free falling and guided bombs', which offered just as much flexibility as the Admiralty claimed for Polaris. The cost of Polaris was also doubted, as were its claims of invulnerability. Here the Air Ministry had detected a major hole in Admiralty thinking. If putting the deterrent out to sea would act to draw any Soviet nuclear attack away from the British mainland, would that not suggest they were able to detect and destroy the Polaris submarines (which they also argued would be far easier than destroying a Blue Streak in its hardened silo)? This was itself only a minor drawback, arguing as it did that Britain would then lose the war whilst not being [quite] as devastated as it might otherwise have been; but coupled with the contention that having more time 'to decide whether to retaliate or not' might act to reduce the will to do so, this would have hit upon Sandys' critical belief that the nuclear deterrent had to present a credible threat. As the Air Ministry put it: 'Retaliation must be a prompt reflex action - if it is not the certainty of it is reduced'.[529]

Polaris' momentum had rattled the Air Ministry, and the Admiralty began to argue that were it adopted the shape of both the Navy and the Air Force 'could hardly be preserved'. Their response to the Air Ministry answered each of their criticisms; the most important from their perspective being in relation to the 'unproven American data' and the credibility of Polaris as a nuclear threat. To rebut the former it was pointed out that Polaris was 'two or three' years ahead of Blue Streak, so this also applied to British weapons. The latter issue was answered with accusations that the Air Ministry had missed the point - 'presumably intentionally'. The Admiralty had not meant to argue that Polaris would draw any Soviet nuclear bombardment away from the mainland. They had merely meant to say that Polaris would not in itself attract an attack on Britain. The trivial strategic nature of this point was revealed when the Admiralty said that in the event of global war an attack on Britain would still be expected; but they argued that 'such an attack would no longer affect the deterrent' and claimed once again that Polaris would prove 'practically immune to any form of counter attack'.[530]

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[528] 'Polaris: Paper for the Ministry of Defence, 21 April, 1958'; AVIA 65/1888. There is also a copy of this report in ADM 1/27375.
[529] 'Polaris and the Nuclear Submarine: Note by the Air Ministry, 2 June, 1958'; ADM 1/27375.
[530] 'Polaris: Reply to questions raised by Air Ministry, 30 June, 1958'; ADM 1/27375.

It is easy to see from this early exchange how Polaris presented Sandys with difficulty. Whilst he expected a devastating Soviet bombardment to open (and decide) any global war, the claims of immunity advanced by the Admiralty tapped into Sandys' concept of Britain's nuclear capability. His support for ballistic missiles was based upon the 'lack of effective counter-measures' first noted in November 1944. If what the Admiralty described as the 'silent, stationary submarine in plenty of sea room' was also immune to counter-measures, then it was the equal of any land-based ballistic missile.[531] It is therefore revealing that, as he wavered over the summer of 1958, Sandys made no attempt to advance Polaris as the most suitable alternative to Blue Streak, and his September memorandum in which he recommended its cancellation in favour of Thor and a more advanced weapon made no mention of Polaris. He concentrated instead on measures aimed at 'remain[ing] in the rocket business'.[532] Having been presented with both sides of the argument, failing to include even a passing reference to Polaris could be seen as conspicuous; particularly as he was in no way anti-submarine, having based his concept of naval warfare on the idea that Soviet submarines were the biggest threat to NATO naval forces. On the other hand, this could be explained if Sandys still felt himself unable to make any sort of decision on Polaris at this point. However, Sandys' approach to Polaris over the winter of 1958 makes it harder to give him the benefit of the doubt, pointing instead towards an inherent hostility to moving the nuclear delivery system away from land-based ballistic missiles.

When, following his September memorandum, Sandys visited Washington, he discussed Polaris only in terms of its potential as a land-based system, dismissing attempts to inform him of submarine developments by claiming that he 'fully understood these problems', and asking whether it might provide the basis for Blue Streak's successor.[533] This was disappointing for the Admiralty, as prior to his visit Mountbatten had enlisted the United States Navy to help him convince Sandys of Polaris' benefits. Writing to Arleigh Burke, the Chief of Naval Operations in the United States Navy, Mountbatten asked whether he could arrange to meet Sandys' Chief Scientific Advisor, Frederick Brundrett, who Mountbatten knew from their time at the Royal Navy Signal School. Mountbatten described Brundrett as 'one of my oldest

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[531] *Ibid.*
[532] 'Ballistic Rockets: Memorandum by the Minister of Defence, 8 September, 1958'; CAB 131/20, D (58) 47.
[533] 22 September, 1958' and 'Co-operation in Missile Development (1): 23 September, 1958' in 'Record of Meetings... Washington, D. C.: September 22-25, 1958'; DSND 6/37.

friends' and a 'true friend of the Navy', hailing his 'sound and excellent advice to the Minister' as the main reason for the Navy emerging relatively unscathed from the White Paper. Now Mountbatten was keen for Polaris 'not to be excluded' from the debates now surrounding Blue Streak and asked Burke to 'spare a few minutes' in support of the Admiralty and bring Brundrett up to speed with the latest developments.[534]

It is not clear whether this meeting took place, but by mid-October the Admiralty noted that Sandys had not been convinced in Washington. In an internal note it was said that Sandys 'dismisses solid fuel weapons' as being both 'inherently short on range' and prohibitively expensive for Britain.[535] Even though the promise of American help could have brought Britain up to speed within three years, commencing research into solid fuel weapons might well have been expensive; but it seems odd that Sandys would rule any particular fuel out as being 'inherently' weak. Even in his own version of events it was the issue of fuel that had led to doubts over whether the Germans were capable of developing a long-range rocket. Now Sandys was guilty of disregarding information that conflicted with his preconceived notions. Then it had been the so-called 'rocket experts' who had ruled it out because they themselves could not conceive of a suitable propellant, and here Sandys was following their lead despite having been told in Washington that by 1963 the United States would possess a solid fuel missile with a range of 5,500 miles.[536] This was the Minuteman, modified versions of which still form a substantial element of the American nuclear deterrent; but in October 1958 the Admiralty was forced to concede that these were valid points backed by Brundrett and the Ministry of Supply, making it an unprofitable line of attack.[537] Fearing that the continuation of Blue Streak might see Polaris 'shut out for ever', Mountbatten suggested that the Admiralty come to the defence of Thor. If the Admiralty could refute Sandys' objections to its lifespan and range, they could then make better use of the constant

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[534] Mountbatten to Arleigh Burke: 16 September, 1958; ADM 205/202; this letter to Burke was complemented by a more anxious letter to Robert Elkins, the Navy representative at the British Joint Services Mission. Here Mountbatten spoke of an 'extremely hot topic' that he did not want to risk being leaked even by secure signal. He filled Elkins in on the uncertainty over Blue Streak, and claimed that Brundrett was well disposed towards the Navy acquiring Polaris. In order to capitalise on this he urged Elkins to also work towards getting Burke to meet Brundrett; Mountbatten added a hand-written post script that reads: 'On second thoughts I think it would be as well to let Arleigh have my letter'; Mountbatten to Robert Elkins: 16 September, 1958; ADM 205/202.

[535] Mountbatten to Selkirk: 17 October, 1958; ADM 205/202.

[536] 'Co-operation in Missile Development (1): 23 September, 1958' in 'Record of Meetings... Washington, D. C.: September 22-25, 1958'; DSND 6/37.

[537] Mountbatten to Selkirk: 17 October, 1958; ADM 205/202.

stream of updated Polaris information in order to make a better case for it being preferable to Blue Streak.[538]

This notion of Sandys being inherently hostile to Polaris can be strengthened by taking his follow-up memorandum of 3 November (in which he had rediscovered his enthusiasm for Blue Streak) into consideration. This mentioned Polaris, but ruled it out across a number of questionable points:

> As an addition to our armament it would be very desirable; but the development of this kind of weapon is not sufficiently advanced for us to stake everything upon it. Moreover, the yield of the POLARIS warhead is only about one tenth of the yield of the warhead that could be carried by BLUE STREAK. It is unlikely that a submarine-launched weapon could have the same degree of accuracy as one launched from a fixed base on land. Because of its small size, the warhead is very wasteful of fissile material and correspondingly expensive. In addition to the cost of the weapons, it would, of course, be necessary to construct six or eight large rocket-launching submarines, which would be extremely expensive.[539]

His comments about the accuracy of Polaris were pure speculation; Blue Streak could hardly have been described as 'sufficiently advanced' (although 'extremely expensive' certainly applied); and Sandys of all people ought to have appreciated that warhead development would have eventually allowed for smaller megaton devices. The dismissive nature of this assessment prompted Selkirk to write directly to Macmillan, circumventing the January directive, objecting to Sandys having made no reference to strategic considerations before discounting Polaris, adding that the 'vast sums' being devoted to the project in America meant that Polaris was 'already years further advanced than BLUE STREAK'.[540] Sandys remained equally vague in the 5 November Defence Committee meeting during which he recovered his support for Blue Streak, mentioning that he had become convinced Blue Streak could work having become aware of new technologies (he did not say what) 'after discussions in the United States'.[541] The

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[538] *Ibid.*
[539] 'Ballistic Rockets: Memorandum by the Minister of Defence, 3 November, 1958'; CAB 131/20, D (58) 57.
[540] Selkirk to Macmillan: 4 November, 1958; ADM 205/202.
[541] CAB 131/19, D (58) 24th Meeting: 5 November, 1958.

Admiralty might not have been aware that these discussions ought to have invalidated his concerns about solid fuels as nobody challenged him on this point, but Polaris was placed on the agenda and Sandys later wrote to Selkirk requesting a note on the effectiveness of Polaris when 'both fitted in submarines and in merchant ships'.[542]

Including surface vessels could suggest that Sandys was slightly behind on Polaris-related thinking, or it could have been a deliberate attempt to cloud the issue; but Selkirk dismissed this idea, concluding that submarine-launched missiles were the 'solution' to Britain's need for an effective nuclear capability 'while so restricting the effort involved'.[543] In his 16 November memorandum that reiterated his support for Blue Streak, Sandys included much of what Selkirk had sent him, generously admitting that Polaris offered 'certain very important theoretical advantages over any land-based system'. Having done so, he restated his previous concerns. Costs were cited, as was the 'feasibility' of something that was 'by no means fully proved' (references to what 'the Americans hope' add a sceptical tone to this memorandum) and the explosive yield 'of less than half of that of THOR'. Sandys said that Britain would need eight fully-equipped submarines, and whilst this would have been a real alternative to Blue Streak, 'it is not yet certain that the POLARIS project, with its immense technical complications, will necessarily be successful'.[544]

Clark has said that Sandys made a 'convincing case' for Polaris and was now 'sufficiently interested' to monitor its progress.[545] Sandys did say he would 'watch the progress' of Polaris, but remained convinced that Britain must go ahead with Blue Streak 'as now planned'.[546] Indeed, this seems like a sop to the Admiralty when considered alongside his previous memorandum talking about how he would welcome Polaris as an 'addition to our armament', knowing that this would be impossible if Blue Streak was continued 'as now planned'. He had used a similarly false concession during the Radical Review to conceal the true extent of his opposition to aircraft carriers, so we should avoid reading too much into his willingness to monitor Polaris. That he was taking it more seriously simply meant that his own campaign against it had to expand.

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[542] Sandys to Selkirk: 5 November, 1958.
[543] 'The Effectiveness of Polaris in Submarines and Merchant Ships: Note by the First Lord of the Admiralty, 10 November, 1958'; ADM 205/202.
[544] 'Ballistic Rockets: Memorandum by the Minister of Defence, 16 November, 1958'; CAB 131/20, D (58) 63.
[545] Clark, *Nuclear Diplomacy*, p. 287.
[546] 'Ballistic Rockets: Memorandum by the Minister of Defence, 16 November, 1958'; CAB 131/20, D (58) 63.

It did not take Sandys long to point out the Soviet Union would eventually get the better of Polaris. He suggested that they might track submarines from their point of departure, and even destroy them in peacetime by sinking them under the polar ice cap where any accident could not be properly investigated.[547] If this was the best Sandys could come up with, the Admiralty stood to benefit from Polaris being debated more openly, even if Sandys had just told the House of Commons that the question of acquiring Polaris 'had not yet arisen'.[548] They also received information from the British Joint Services Mission in Washington suggesting that Polaris' range could still be increased dramatically, with a range of 2000 miles deemed possible by early-1964, and 2500 miles not long afterwards.[549] Whilst this was going on, the Air Ministry intensified their nascent campaign for an updated bomber. They still believed that counter-measures to Sandys' preferred land-based ballistic missiles 'will certainly be developed eventually', and Ward told Sandys that the Air Staff wanted an aircraft that could take off vertically; possessed 'Good endurance using flight refuelling if necessary'; and carried both 'long range powered bomb[s]' and non-nuclear weapons. If these conditions could be met Ward believed that speed was not important, listing the benefits of such an aircraft as:

> (a) Would be independent of fixed and vulnerable bases for long periods.
> (b) Could take off at short notice.
> (c) Could remain airborne and poised for attack under positage [*sic*] (positive) control, without becoming irrevocably committed.
> (d) Could mount a flexible attack from any point on the Soviet or Chinese perimeter very quickly.
> (e) As an instrument of national policy could continue the important role played by the 'V' bombers not only as a deterrent but also in cold and limited wars.[550]

It might not have been immediately obvious to Ward, but these points were exactly - save for the direction of vertical travel - what the Admiralty were using to sell Polaris.

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[547] These were described as Sandys' 'privately expressed views' in an internal Admiralty note of 15 December, 1958; ADM 205/202.
[548] Hansard HC vol 597 col 76w (10 December, 1958).
[549] Selkirk to Sandys: 16 December, 1958; DEFE 7/2162.
[550] Ward to Sandys: 16 December, 1958; ADM 205/202.

The Air Ministry were forced to attack Polaris on similar lines to Sandys, citing its cost, as well as supporting the fanciful idea about the Soviet Union staging accidents at sea, and calling the flexibility of Polaris into question by pointing out that submarines were slower than aircraft.[551]

Selkirk wrote to Sandys to complain about what he perceived as another failure to consider Polaris 'objectively and correctly', but made little fuss about this latest round of Air Force attempts to strengthen their hold on Britain's nuclear capabilities.[552] This was because whilst the Admiralty had pushed Polaris with caution due to its unproven qualities, they were also constrained by their lack of enthusiasm for an independent deterrent capability. We have seen how during the Radical Review the Navy reversed Sandys' arguments by asking why Britain could depend on America at sea but not hide behind Strategic Air Command, and they had stayed true to this point. The reason for this was that throughout the 1950s the Navy had concerned itself with the issue of nuclear sufficiency - the point where the Soviet Union acquired the capabilities to devastate the United States - which grew in importance following Sputnik and the R-7.[553]

This had been touched upon in May 1957, but began to attract serious discussion in January 1958 when the Joint Planning Staff reported to the Chiefs of Staff on the likely nature of global war in 1970. Boyle felt that the 'rapid and unpredictable' course of technological development made a nonsense of planning for a war twelve years away; and besides 'our policy was the avoidance of war'.[554] The report had started out as a naval study, and it is obvious why Boyle was opposed to further studies and did not want American policy-makers to think that Britain was altering its policies. Nevertheless, another version was produced that spurred the debate on. The report did not actually undermine the RAF, stating that it would become 'even more important' to maintain both a worthwhile deterrent capability and the will to use it, recommending that British defence policy should continue down its current path.[555] Boyle now happily

[551] Ward to Sandys (2): 16 December, 1958; ADM 205/202.
[552] Selkirk to Sandys: 19 December, 1958; ADM 205/202.
[553] 'Mountbatten and others pressed the "nuclear sufficiency" line for a number of years... While the politicians would never endorse this line explicitly - the "independent" deterrent was far too important a political issue - they did allow the Royal Navy in practice to develop an "East of Suez" justification for a conventional balanced fleet'; Moore, *The Royal Navy and Nuclear Weapons*, p. 186.
[554] DEFE 4/103, C.O.S. (58) 2nd Meeting: 7 January, 1958.
[555] 'The Effect of Nuclear Sufficiency: Report by the Joint Planning Staff, 27 January, 1958'; DEFE 4/104, JP (57) 151 (Final).

accepted the report 'as it stood', but Mountbatten and Templer demurred. Templer wanted 'major amendments' if the deterrent was no longer effective 'except in certain areas vital to one side or the other', whilst Mountbatten had 'never agreed that the current Government policy... would necessarily remain valid after nuclear sufficiency'. He said that the value of nuclear deterrence 'depended upon the extent to which it was believed in', which for Britain meant that a truly independent capability was irrelevant as it was 'unlikely' that the Soviet Union would believe that Britain would use its nuclear weapons against them without full American backing.[556] This opened the door for a re-examination of the nuclear/non-nuclear balance of forces that the White Paper had altered, but more importantly for Polaris meant that the British deterrent did not have to be based upon an independent weapon system. Polaris bought in from the United States, even with certain conditions on its use, would have been suitable in this new age of nuclear sufficiency. This led Sandys to accuse Mountbatten in late-1958 of not really believing in nuclear deterrence after Mountbatten said the insistence that Britain could resort to nuclear warfare without United States support 'would surely be to commit national suicide immediately'.[557]

This conflict in naval thinking came to a head in 1959 as the campaign in support of Polaris became more overt. In January it was agreed that the basis for the British nuclear capability would be subject to a rigorous examination, which the Ministry of Defence expected would take six months.[558] Sandys accepted this timeframe because Blue Streak was going ahead as planned and because he assumed that each system would be assessed in relation to the government's existing policies. This put the pressure on the Admiralty to prove their case, and Mountbatten wanted to know whether or not the government would continue to pursue its existing definition of 'independence'.[559] Sandys immediately began sowing doubts about Polaris, claiming that it would soon be just as easy to pinpoint the location of a submarine as a land-based missile.[560] When the Admiralty heard about this they shrugged it off, but said if Sandys was right they would like to know how to go about doing it.[561] The claims of invulnerability associated with Polaris were its strongest suit, and when the Admiralty received word that the United

[556] DEFE 4/104, C.O.S. (58) 16th Meeting: 18 February, 1958.
[557] 'Meeting of the Minister of Defence with the Chiefs of Staff: 28 October, 1958'; DEFE 7/2300; see also: Ziegler, *Mountbatten*, p. 561; Grove, *Vanguard to Trident*, p. 232.
[558] DEFE 4/115, C.O.S. (59) 1st Meeting: 1 January, 1959.
[559] DEFE 4/115, C.O.S. (59) 4th Meeting: 13 January, 1959.
[560] Tam Galbraith (Civil Lord of the Admiralty) to Mountbatten: 26 January, 1959; ADM 1/27389.
[561] It was suggested elsewhere that Sandys be taken 'out to sea for an exercise' to show him how difficult it was; Caspar John to Mountbatten and Galbraith: 28 January, 1959 and a loose note in; ADM 1/27389.

States Deputy Secretary of Defence was visiting London to discuss early warning systems and anti-ballistic missile missiles, which were expected to be fantastically complicated and therefore expensive, they reacted by saying that this 'really does put BLUE STREAK out of court'. They also claimed that the Ministry of Defence had been aware that such systems would be required 'for some time', and that since any new defences would then need their own defences, there was no end to this logic 'as long as the principle of BLUE STREAK persists'.[562]

February saw an increase in the flow of information from Burke. In order to refute Sandys' doubts about the invulnerability of Polaris, Mountbatten wrote to Burke asking for all the information he had.[563] It was also reported within the Admiralty that although the Ministry of Defence was willing to envisage the use of solid fuel missiles, whether land-based or submarine-launched, 'they are highly skeptical [*sic*] of any such development, if not actually opposed to it'.[564] This was another way for Sandys to defend Blue Streak, even though he had received the information about extending Polaris' range in December, but the Admiralty were boosted by Burke telling Mountbatten that he expected to have five submarines out on patrol by mid-1961, and promising to keep him supplied with all the information 'which our laws permit'.[565] Mountbatten wrote asking for 'all the ammunition we can possibly get' as 'speed is of the utmost importance'.[566] In his reply Burke said it was a 'never ending source of wonder' that people still questioned submarine-launched missiles. Even the most devastating land-based systems would have their locations known by the enemy, which, he said, was their 'great defect':

> If, possessing this knowledge, the Soviet believes that he is capable of destroying these sites before they can react to his attack, then deterrence has failed, regardless of whether or not the Soviets are correct in the belief... If the deterrence fails to deter, the arguments of the proponents of land-based systems, that they can achieve some degree of invulnerability by hardening,

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[562] 'The present ideas are that it must climb to 500,000 feet and carry a megaton warhead... In other words we must be double at least the present estimated cost of BLUE STREAK'; R. A. Allan to unspecified: 22 January, 1959; ADM 205/202.
[563] Mountbatten to Selkirk: 13 February, 1959; ADM 1/27389.
[564] 'European I.R.B.M.: 17 February, 1959'; ADM 1/27389.
[565] Burke to Mountbatten: 6 February, 1959; ADM 205/202.
[566] Mountbatten to Burke: 17 February, 1959 and Burke to Mountbatten, 28 February, 1959; ADM 205/202.

> dispersal, holes-in-the-ground, etc., become academic because the general war will have commenced.[567]

This argument would have represented a declaration of open warfare against Sandys' policy preferences. Yet, rather curiously, the momentum built up since the beginning of 1958 began to slip away from the Admiralty at this point. Charles Lambe, who was responsible for the introductory quote about Sandys doing 'all in his power' to protect Blue Streak, used the same internal note to urge caution. Lambe was the *de facto* First Sea Lord by May 1959, his appointment delayed only until Mountbatten could succeed Dickson as Chief of the Defence Staff, and he warned that it would be 'very unwise for the Admiralty to stick its neck out too far'. Lambe was fully aware of what Sandys wanted to happen, claiming that he had suspended the investigation into the future deterrent as - quoting what he had heard were Sandys' words - 'he did not wish the validity of BLUE STREAK to be questioned'. In spite of this he put his faith in Mountbatten, arguing that the Navy would be stronger 'if we were (at any rate, apparently) pushed into the POLARIS project'. He therefore wished to see the 'propaganda' operation halted and for the Admiralty to build a convincing case for Polaris in the background 'to answer any queries when they come - as, in my view, they undoubtedly will'.[568] Selkirk tried to convince Lambe that Blue Streak was becoming more secure by the day and that if Polaris was to be taken on 'we must be prepared to make the running ourselves', but he was unsuccessful.[569]

Conclusion

Historians have noted this loss of momentum in the Admiralty campaign. Richard Moore wrote that Mountbatten maintained a 'studious silence' when he ought to have been pushing Polaris as Blue Streak's successor from mid-1959 onwards.[570] Moore puts this down to the aforementioned Admiralty belief that there was no need for an independent capability, and that once Blue Streak had been cancelled the United States was unlikely to provide weapons for such a capability.[571] Clark has also highlighted the 'two contradictory goals' of playing down the need for an independent nuclear capability

[567] Burke to Mountbatten, 28 February, 1959; ADM 205/202.
[568] Lambe to Selkirk: 25 May, 1959; ADM 205/202.
[569] Selkirk to Lambe: 1 June, 1959; ADM 1/27389.
[570] Moore, *Nuclear Illusion, Nuclear Reality*, p. 49.
[571] Moore, *Nuclear Illusion, Nuclear Reality*, p. 49.

whilst also backing Polaris in a 'self-conscious programme for wresting the deterrent from the RAF'.[572]

The imprecise thinking prevalent within the Admiralty can be held in stark contrast to the logically consistent policy preferences with which Sandys approached the provision of an independent British nuclear capability. Although the Admiralty argued that Polaris possessed all the qualities that made land-based ballistic missiles Sandys' preferred method of obliterating the Soviet Union, it can be seen throughout this period that Sandys maintained an aversion to the submarine-launched alternative. Resorting to criticisms that might have been applied to Blue Streak by similarly unsympathetic parties, Sandys was never able to make a truly convincing case against Polaris. Indeed, his cognitive dissonance over the question of solid fuels would suggest that he did not even intend to. Provided he could bring the weight of the Ministry of Defence and its esteemed scientific advisors to bear, he only had to convert the uncertain to the kind of official Ministry of Defence orthodoxy that he had previously campaigned against. This was also the case with Thor. Where Macmillan and others saw the benefits of buying the British nuclear capability 'off the shelf', Sandys worked to prevent Thor being seen as anything more than an interim measure. He did this relatively easily. The main lesson to be taken from the debates surrounding Thor was that Sandys was fully committed to Britain being able to unilaterally inflict significant damage on the Soviet Union, and how this leads directly into his approach to Blue Streak. The following section will use this sincere belief in the need for a truly independent nuclear capability as the base explanatory means for understanding Sandys thinking and actions in respect of Blue Streak. It was this idea, coupled with his long-standing belief in the qualities of ballistic missiles, that informed his support for Blue Streak, and which eventually left him isolated and forced to defend his advocacy of a failed weapon project.

[572] Clark, *Nuclear Diplomacy*, p. 288.

Blue Streak

In the closing stages of the Second World War, Britain was subjected to over 1000 V-2 attacks, and it was natural that the British government should have taken an immediate post-war interest in these new weapons. However, the United States and Soviet Union had captured most of the German scientists involved, allowing them to effectively continue Germany's work on unmanned weaponry. This left Britain to make do with access to the Peenemünde team and the test firing of some captured V-2s. This comparative lack of knowledge, and the government decision to assign overwhelming priority to the development of atomic weapons, left few resources to spare for updated delivery systems (whether manned or unmanned) and research was mainly concentrated on defensive surface-to-air weapons.[573] There is, therefore, nothing to suggest that Sandys' report of November 1944 provided any significant influence on government policy.

We have seen how this report provided the basis for Sandys' policy recommendations at the Ministry of Supply, and how it consequently placed him well ahead of other influential policy-makers in relation to these new weapons. That is not to say that nobody else had recognised the potential of unmanned weaponry, but Sandys does appear to have been an exception at the highest levels of the defence policy-making process in calling for an increased reliance upon these nascent weapon systems.[574] Further down the policy-making hierarchy it was a different story, and although Sandys' 1953 memoranda were received with caution by the Ministry of Defence and Service Ministries, voices within the Air Ministry were operating on similar wavelengths. In January 1953, G. W. Tuttle, the Assistant Chief of the Air Staff (Operational Requirements), circulated a note on the 'long-range surface-to-surface weapon'. This

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[573] See: Boyes, *Project Emily*, pp. 13-18; Groom, *British Thinking About Nuclear Weapons*, pp. 36-37; Morton, P., *Fire Across the Desert: Woomera and the Anglo-Australian Joint Project, 1946-1980* (Canberra: Australian Government Publishing Service, 1989), pp. 5-10.

[574] Fuller and Liddell Hart were quick to see this 'master weapon' would ensure that 'the problem of security has undergone a fundamental change'; Fuller, J. F. C., *Armament and History: A Study of the Influence of Armament on History from the Dawn of Classical Warfare to the Second World War* (London: Eyre and Spottiswoode, 1946), pp. 194-95; Liddell Hart, B. H., *The Revolution in Warfare* (London: Faber and Faber, 1946), p. 83; even Arthur 'Bomber' Harris, who laid Germany to waste as Commander-in-Chief of Bomber Command, wrote in 1947 that ballistic missiles would eventually prove a 'much more efficient' means of delivering the nuclear weapons he felt would revolutionise warfare, whilst predicting that the Air Force 'will go on the way of the other services and tend to cling to the antiquated weapons with which it will conceive its interests to be bound up'; Harris, A., *Bomber Offensive* (London: Collins, 1947), p. 272.

said the V-bombers, which had barely entered serious testing at this point, would not prove effective for long:

> I believe the only way to ensure delivery [of nuclear weapons] in ten years time will be by means of a supersonic unmanned missile, and I believe that this solution will take ten years to achieve. We must start now. In ten years, any manned aircraft is unlikely to survive in the face of a guided weapon defence... In ten years I would suggest that if there has not already been a war, our stock of atomic warheads will allow a force equipped with this weapon to be a real deterrent without the assistance of Allies.[575]

The Air Staff examined the problem throughout 1953, but they could only proceed on particular requirements after Sandys' technological exchanges with the United States.[576] In April 1955 an American delegation arrived to advise the Ministry of Supply, and potential problems were apparent at this early stage.[577] Thomas Pike, the Deputy Chief of the Air Staff, kept an account of the meetings and reported that whilst Britain had hoped to develop its own ballistic missile within ten years, the Americans expected the Soviet Union to be capable of 'threatening us' with their own weapons by 1960 (as Sandys had predicted in 1953), and told the Ministry of Supply that they should be looking to deploy a suitable weapon by this point. Pike thought that even with substantial American help Britain would have been 'jolly lucky' to meet its original target, but the Air Staff soon placed an order for an advanced weapon 'to fill a strategic bombardment role'.[578] They wanted a nuclear warhead-carrying missile with a 2000 mile range (with development potential for 2500 miles) that could be operated 'in any part of the world' that was accurate to within 8000 feet (with a 50% circular error) of its target. Further specifications calling for a 90% reliability rate and an ability to be launched within two hours made this an ambitious target.[579] The weapon was codenamed Blue Streak.

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[575] 'The Long Range Surface-to-Surface Weapon: 16 January, 1953'; AIR 2/13206.
[576] 'Air Staff Target No. OR/203 (Issue 2) - A Long Range Surface-to-Surface Guided Weapon: 14 August, 1953'; AIR 2/13206.
[577] Internal Note: 15 March, 1955; AIR 19/813.
[578] 'The R.A.F. Ballistic Rocket: Report by the Deputy Chief of the Air Staff, 18 April, 1955'; AIR 19/813.
[579] 'Air Staff Requirement NO. O.R./1139 - A Medium Range Ballistic Missile System: 8 August, 1955'; AIR 2/13206.

The official files show that, whilst Britain trailed the United States, co-operation allowed for relatively rapid progression, and Brundrett and his Defence Research Policy Committee became Blue Streak's strongest supporter during these years.[580] In a July 1956 report, the Committee had concluded that only Blue Streak and its 'convincing capability for global war' would prove an effective deterrent, and that what seemed like daunting development costs would be recouped through its successors (or through related projects) once the 'know-how' had been acquired.[581] In spite of this, Navias has shown that the Air Ministry 'tended to be most ambivalent' about acquiring the missiles they had commissioned, citing a September 1956 discussion in which they said they would have preferred the supersonic bomber that was then being discussed. Even the Ministry of Supply began to worry about an 'unjustifiable duplication of effort' should the Americans look to base their own missiles in Britain.[582] It was left to Monckton, the Minister of Defence, to overcome this initial bout of scepticism, writing a lengthy memorandum justifying the possession of a British-built ballistic missile. Taking his cue from Brundrett, Monckton's views could have been Sandys' own, emphasising the 'revolutionary development in warfare' that unmanned weaponry promised, and claiming that there was 'no serious doubt that they will supersede the manned aeroplane for most military purposes'. Therefore failing to replace manned bomber aircraft with unmanned weapons was to effectively place an expiration date on Britain's nuclear strike capability by 'undermining the moral and political effect of our bomber force immediately'. Monckton concluded that this would not only 'turn us into an American satellite from about 1965 onwards', but, in an early warning against the dangers of nuclear sufficiency, risk Britain being left alone should the United States abandon Europe once the Soviet Union could attack them directly.[583]

This section does not attempt to provide a comprehensive history of Blue Streak, but the debates that raged surrounded the programme until its cancellation as a weapon system had been established early in its life. The nature of its supposed invulnerability - both in the air and in the ground - had been raised at this early stage, as had the potential effects of its development on the Air Force; but the Committee report struck a chord

[580] AIR 19/813 contains several progress reports from 1956 which claim American observers were impressed with the speed of British developments; Navias, *Nuclear Weapons and British Strategic Planning*, pp. 121-22; see also: Clark, *Nuclear Diplomacy*, pp. 165-66.
[581] 'U.K. Ballistic Missile Requirements: Defence Research Policy Staff, 27 July, 1956'; DEFE 7/2246.
[582] This was the Avro 730, the cancellation of which was announced in the White Paper; Navias, *Nuclear Weapons and British Strategic Planning*, pp. 120-23.
[583] 'U.K. Development of Ballistic Missiles: Memorandum by the Minister of Defence, 25 September, 1956'; DEFE 7/2246.

with Sandys' previous advocacy of these weapons. The idea of any delivery system needing a 'convincing capability for global war' worked with Sandys' concept of deterrence consisting of what his June 1953 memorandum described as 'actual preparations for war, such as will convince a potential aggressor that he will surely be defeated'. It was only when Sandys carried these ideas over from the Ministry of Supply that Blue Streak gained the type of consistent support that it had previously lacked. Prior to 1957, the Air Ministry and the Ministry of Supply, the two departments responsible for missile development, had been uncertain about Blue Streak; and whilst Monckton appears to have been firmly on board, he had resigned by mid-October 1956. When Sandys made a viable nuclear capability the central tenet of the 1957 White Paper, it followed that whatever other areas were to be decided by compromise, Blue Streak would have to become his priority, and in its closing moments the main pillars of Sandys' strategic concept - the superiority of unmanned weapons and the inability of Britain to withstand them, as well as the conventionalisation of nuclear weapons - came together, demonstrating that his isolation in favouring Blue Streak was as much a case of him championing one particular weapon as it was his relatively unconventional approach to fighting the Cold War.

Policy Implementation in the Aftermath of the 1957 White Paper

The 1957 White Paper had made no firm commitment to a British-built ballistic missile, but its successor of February 1958 did. This is not particularly remarkable in itself; but historians have regularly noted the constant financial pressure Blue Streak was under, and yet between April 1957 and February 1958 the programme seemed to escape the Treasury scrutiny it was otherwise used to.[584] This is noticeable, since the Chancellor often provided the decisive voice on most areas of defence policy, including the size of the V-bomber force. During this period there appears to have been no serious attempt to cancel the programme, and its continuation was confirmed with little objection even after the Ministry of Defence lobbied Treasury civil servants for official support in August 1957, which would have been an opportune time to question the programme.[585] This is where circumstances may have favoured Sandys. His attempts to

[584] See: Boyes, *Project Emily*, p. 47; Groom, *British Thinking About Nuclear Weapons*, p. 257; Hill, *Vertical Empire*, p. 83.
[585] Powell to Roger Makins: 23 August, 1957; DEFE 7/2246; the Ministry of Supply also wrote to the Chancellor claiming that 'financial limits on expenditure are definitely holding back progress'; Aubrey Jones to Thorneycroft: 6 September, 1957; DEFE 7/2246.

explicitly link the 1957 White Paper to the development of a British-built ballistic missile were restrained by two cautious Service Ministries and Macmillan's ambiguity, but he was well-placed to make his case post-publication because of the Blue Streak-friendly team at the Ministry of Defence. In addition to Brundrett's scientific weight, his two most senior civil servants, Powell and R. C. Chilver, were strong believers in the need for British-built ballistic missiles, and Sandys also retained K. G. Post, who had been his Military Assistant during the Second World War, as his personal advisor.[586] With this group at the heart of the policy-making process, Sandys could better promote Blue Streak, establishing momentum in its favour and allowing him to defend it against whatever opposition the Service Ministries and Treasury could provide.

With an impending round of Defence Committee meetings in the summer of 1957, it was expected that Sandys would have to defend Blue Streak. In order to do so, Chilver provided him with a draft memorandum that sought to make the case for it. This made it quite clear that Britain had to go ahead with the programme, but Sandys still made significant alterations to make his policy preferences more apparent. Where Chilver had suggested that Sandys should justify Blue Streak with 'the same reason for having the V-Bomber force', Sandys changed this to 'developing the V-bomber force', casting Blue Streak as the successor weapon in order to prevent the two delivery systems being seen as complementary. The draft also said that in absence of any plans to replace the V-bombers, 'if we do not have Blue Streak we shall have no deterrent under our own control after these aircraft are gone'. Sandys replaced this entire line with his own that said the planned supersonic bomber had been cancelled 'in view of the likely progress of ballistic rockets, and if we do not have Blue Streak we shall have no deterrent under our own control after the bombers are gone'. By referring to 'the bombers' in general and the progress of ballistic missiles as a whole, Sandys had introduced a definite move towards his overriding belief that unmanned weaponry would inevitably supersede manned aircraft, and his removal from the draft of sections relating to manpower, 'know-how', and limited war suggest that he did not wish these peripheral matters to cloud the central issue - that abandoning Blue Streak 'would be to abandon development of offensive weapons generally'.[587]

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[586] Goodman, M. S., *The Official History of the Joint Intelligence Committee: Volume I - From the Approach of the Second World War to the Suez Crisis* (Abingdon: Routledge, 2014), p. 134.
[587] 'U.K. Development of Ballistic Missiles (First Draft): 27 May, 1957'; DEFE 7/2246.

Chilver returned a defensive second draft that incorporated some of Sandys' amendments whilst framing the issue as deciding 'whether to continue'. Sandys objected to this line of argument, which he thought would 'cast doubts on this project' where they did not already exist.[588] Chilver informed Sandys that he was merely attempting to build the strongest possible case for Blue Streak, as the Treasury had started to question the programme. This was standard advice from his Deputy Secretary; but in his letters to Sandys, Chilver revealed how the policy-making elite at the Ministry of Defence identified their interests with the success of Blue Streak. He suggested that the Ministry of Defence could time the circulation of any memorandum to their advantage by waiting until long-term research and development had been completed. By holding out it was also conceivable 'that a favourable decision will fall into our laps before that stage'.[589] In the event Blue Streak was not raised in the summer Defence Committee meetings.[590] However, it is important to bear in mind the approach that Sandys and his team had taken to Blue Streak at this early stage, and how this mindset would come to affect both its development, and also the extent to which alternative weapon systems were given fair consideration.

Having failed to attract scrutiny over the summer of 1957, Blue Streak enjoyed a run of good fortune. We have seen how disarmament proposals saw Macmillan shed his doubts about the need for nuclear independence, and also how the Navy had proven unsuccessful in its [limited] attempts at reversing Sandys' strategic priorities. More importantly, the Air Ministry had demonstrated its backing for Blue Streak during the White Paper discussions, taking Sandys' line that the success of the White Paper depended upon Blue Streak entering service.[591] Blue Streak also strengthened its position in the debates over air defence and the V-bomber force that took place in late-1957 following the successful testing of Britain's first megaton weapon. During these discussions, Sandys' policy preferences were more apparent, as he sought to undo the official statements contained in the White Paper by seeking the abolition of Fighter

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[588] 'United Kingdom Development of Ballistic Missiles: Memorandum by the Minister of Defence (Draft), 11 June, 1957'; Sandys' hand-written note was made the following day; DEFE 7/2246.
[589] R. C. Chilver to Sandys: 24 June, 1957; DEFE 7/2246.
[590] He submitted memorandums on defence expenditure, naval construction, fighter command, colonial defence requirements, and two on the strategic bomber force; CAB 131/18, D. (57) 6th Meeting: 31 July, 1957 and CAB 131/18, D. (57) 7th Meeting: 2 August, 1957.
[591] Maurice Dean to Ward: 4 March, 1957; AIR 19/856; loose notes: 2 April, 1957; AIR 19/849; in January the Air Ministry had written to Sandys saying 'we should insist on continuing to keep it (Blue Streak) in our programme not only because we want it but also because, politically, we cannot afford to be dependent upon America for this vital weapon. Operationally and technically we must be free'; 'Note for the Minister of Defence: 24 January, 1957'; AIR 2/14712.

Command and a reduction in the proposed number of V-bombers. Navias has framed Sandys' contribution to these debates as being another attempt to pursue economies at the expense of both sound strategic policy, and also what he had said in the published White Paper. However, this interpretation again neglects Sandys' over-arching strategic concept as having provided the dominant influence on his thinking.

Whilst his true feelings had been diluted in the published White Paper, we have seen how Sandys was convinced that there were no effective counter-measures to ballistic missiles on the horizon to the point that his entire strategic concept emanated from this belief, and at the end of 1957 he was allowed to re-state his case. In a November note to Macmillan (he did not wish to involve the Air Ministry until Macmillan, the Chancellor, and the Foreign Secretary had approved the notion) he extended the logic of the White Paper which restricted fighters to protecting the deterrent. Sandys ruled out the possibility of a Soviet surprise attack because such 'large-scale preparations' would not go unnoticed, meaning there would be ample warning to keep the V-bombers on high alert:

> In these circumstances, the absence of any defence would clearly have no effect on the ability of our bombers to take off on their initial sortie. It is true that a fighter defence might succeed in preserving some of our airfields from destruction, thereby enabling those of the bombers which returned safely to make further sorties. But, having regard to the heavy casualties which are expected, this cannot be more than a marginal factor. Moreover, it is questionable whether the Russians would, in fact, attack empty airfields in preference to centres of population.[592]

Sandys concluded that 'from the military standpoint, our fighter defences in Britain do not fulfil a really essential function'.[593] The timing of this proposal may have been fortunate with Macmillan just back from Washington, but by December the Prime Minister was also considering abolishing Fighter Command, which he had originally wished to do as Minister of Defence in 1954. The Defence Committee considered the fact that fighters would prove 'useless' against ballistic missiles, and Macmillan agreed with Sandys in relation to 'the military point of view' making it difficult to justify fighter

[592] 'Fighter Command: Note by the Minister of Defence, 13 November, 1957'; DSND 6/10.
[593] *Ibid.*

expenditure, but both Macmillan and Sandys gave Fighter Command a reprieve due to its role in protecting Strategic Air Command facilities and because Macmillan had concerns about the 'psychological impact' of appearing to leave the British people without any fighter defence.[594]

Navias has written that Sandys here had the choice between 'taking his own declaratory statements [in the White Paper] about defending the V-bombers seriously' and the pursuit of further spending reductions, concluding that he pressed forward with his search for economies and was not overly attentive to the problems of vulnerability'.[595] Sandys did write to the Air Ministry asking how much money could be saved on fighter defences, but he had also told Ward that there could be no war until the Soviet Union acquired enough ballistic missiles for a surprise attack.[596] It is irrelevant to this thesis whether Sandys was correct in thinking fighter defence had become redundant, but it is incorrect to claim that he had not considered the problems of vulnerability. He had been doing so since the Second World War, and just happened to have reached a different conclusion to the Air Ministry.

Fighter Command survived, but the acceptance of what Sandys had originally sought to include in the White Paper - that defence was impossible, and that Britain would be decisively ruined in any nuclear exchange - had ramifications for Blue Streak. If the V-bombers could get away before their airfields were destroyed, then concerns about the time it took to prepare Blue Streak were weakened. If they would be destroyed on their runways in a surprise attack, then planning beyond that moment was an irrelevance, as Britain would have lost the war. These concerns were also reflected in the debates that took place concerning the future of the V-bombers. Sandys said that any Soviet attack would be 'preceded by a period of international tension or localised war', which would also have provided enough time for Blue Streak to be made ready.[597] More importantly,

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[594] Macmillan told the Cabinet that 'public opinion... would be liable to react adversely to our apparent inability to provide a defence for the deterrent'; CAB 131/18 D. (57) 14th Meeting: 31 December, 1957; CAB 128/31/596: 31 December, 1957; he had noted in his diary the previous month that the issue being 'politically dynamite' complicated an otherwise straightforward question: 'A huge sum of money is spent on it, but I don't believe they could protect us from Russian bombers'; 20 November, 1957 and 23 December, 1957; Catterall, *The Macmillan Diaries: 1957-66*, pp. 73-74 and p. 80.

[595] He quotes Boyle's recollection that 'I was totally opposed to Sandys's sudden policy of no more manned fighting aircraft'; Boyle to Lawrence Freedman: 18 May, 1988; Navias, *Nuclear Weapons and British Strategic Planning*, pp. 172-75.

[596] Sandys to Ward: 26 November, 1957; DSND 6/7; *Navias, Nuclear Weapons and British Strategic Planning*, p. 174.

[597] 'Fighter Command: Note by the Minister of Defence, 13 November, 1957'; DSND 6/10.

if the principle of there being no defence against nuclear attack was clearly not yet fully accepted - hence the continuing debate over fighter defences - the Prime Minister coming to formally recognise this offered tacit support to Blue Streak as the most convincing basis for any policy of deterrence. This ties into the debates surrounding the strength of the V-bomber force, where economic concerns have again been cited as having dictated Sandys' actions.

The first draft of the 1957 White Paper had said the V-bombers 'will in due course be supplemented and later replaced by ballistic rockets'.[598] The published White Paper differed and declared an 'intention' that the V-bombers would merely be 'supplemented by ballistic rockets'.[599] When Sandys became Minister of Defence the existing plans expected Britain to have a force of 184 V-bombers, 120 of which would be Mark II versions able to carry the Blue Steel propelled bomb. However, existing orders provided for an eventual force of 176, only 40 of which would be Mark IIs.[600] Sandys felt that propelled bomb capabilities were crucial to 'any serious deterrent influence upon the Kremlin', and in May he put forward policies for 184 aircraft including 120 Mark IIs.[601] The Chancellor refused to commit himself when Sandys' put in a request for 95 Mark IIs, but Sandys told the Defence Committee in July that he still felt 'that a force of this size is desirable'.[602]

In August Sandys retreated from these numbers, which Navias has said was due to Treasury pressure, Sandys' apparent willingness to deter in concert with the United States, and his belief that 'if worst came to worst' Britain would still possess enough aircraft to deter the Soviet Union independently. In order to remain consistent with his argument that Sandys largely ignored strategic considerations, Navias quotes Sandys as going back on his previous advocacy of Air Ministry figures by saying 'there could be no arithmetical proof that this was the right figure'.[603] This would give the impression that Sandys was wriggling out of his previous recommendations with vague explanations; but his words need to be placed in their full context:

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[598] 'Defence White Paper: Draft B, 13 March, 1957'; ADM 205/114.
[599] *Defence: Outline of Future Policy*; DSND 6/52.
[600] CAB 131/18, D. (57) 2nd Meeting: 27 February, 1957.
[601] 'The Strategic Bomber Force: Memorandum by the Minister of Defence, 27 May, 1957'; CAB 130/22, GEN. 570/2.
[602] CAB 130/22, GEN 570 1st Meeting: 29 May, 1957; 'Strategic Bomber Force: Memorandum by the Minister of Defence, 26 July, 1957'; CAB 131/18, D. (57) 15.
[603] Navias, *Nuclear Weapons and British Strategic Planning*, p. 171.

> The Air Staff now proposed a front-line strength of 184 aircraft of which 120 would be Mark II Victors and Vulcans as the minimum needed to provide an effective military force in global war. There could be no arithmetical proof that this was the right figure; but the operational arguments in its favour were sound.[604]

It is true that Sandys recommended that the V-bomber force be reduced to 144 with 104 Mark IIs; but to say, as Navias does, that reductions were being made 'on the basis of economic considerations' misinterprets Sandys' motives. Of course Sandys considered the economic effects of any proposal, pointing to 'our investment programmes as a whole... imposing a severe strain on the economy'; and he did say that 'we should never, in practice, expect to challenge the Soviet Union alone'.[605] But this does not mean he focussed on costs and only then sought to strengthen his arguments 'with an explicit rejection of a preference for unilateral strategic actions', as Navias claims.[606] Given that we have seen in the previous section how he valued the retention of an independent nuclear capability in relation to Thor, and how he had alluded to it just months before this apparent August climb-down, it is hard to accept that he had gone back on this point in order to save relatively small amounts of money.[607] More likely, he still regarded 104 Mark II V-bombers as constituting a worthwhile threat until they too could be upgraded - that is to say replaced - by Blue Streak. Powell confirmed this in later life when he recalled that the prospect of Blue Streak 'coming in to take over' was known to 'lay behind' decisions made about the V-bombers, and that, whilst economies had to be made, it was believed that 144 aircraft 'would be quite sufficient to determine the weight of attack that would serve as the deterrent'.[608]

The 1958 White Paper and the First Period of Doubt

These shifts were reflected in the 1958 White Paper, *Britain's Contribution to Peace and Security*, which merely reported the progress of Sandys' previous offering. Devoting lengthy passages on disarmament and interdependence, this latest White Paper

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[604] CAB 131/18, D. (57) 7th Meeting: 2 August, 1957.
[605] CAB 131/18, D. (57) 7th Meeting: 2 August, 1957.
[606] Navias, *Nuclear Weapons and British Strategic Planning*, pp. 171-72.
[607] 54 million pounds over five years - less than one per cent of projected defence spending over that period. Based on the figures included in 'Strategic Bomber Force: Memorandum by the Minister of Defence, 26 July, 1957'; CAB 131/18, D. (57) 15.
[608] 'Defence Turning Point', p. 31 and NHP/SR2.

also went further than its predecessor in its backing of Blue Streak, claiming that despite acquiring Thor, a ballistic missile 'of a much more advanced type is being developed on the highest priority'.[609] That this could have been published as official government policy in February 1958 suggests that Blue Streak had benefitted from the debates over bombers and fighters, as the policy-making process for the 1958 White Paper began in December 1957.[610] However, as was previously the case, the finished product differed from its earlier versions. The basic premise of 1957 remained; but whilst the first few drafts of January all mentioned ballistic missiles, there was nothing to suggest that Britain would produce its own. It was clearly stated that manned bombers would be 'supplemented' by ballistic missiles, but this was directly related to the Thor agreements. Even when drafts paid tribute to the Soviet Union's 'remarkable progress in rocket development' there was no firm commitment to a British-built weapon, choosing instead to cite American weapons as countering Soviet developments and maintaining the stalemate.[611] Further proofs of late January and early February made similar omissions, and there is nothing to suggest that the Ministry of Defence was questioned about this.[612]

It was not until 5 February that the 'British ballistic rocket of more advanced design' was mentioned in the version submitted to the Cabinet and the Defence Committee, who raised no objection to its inclusion.[613] The Air Ministry was beginning to question the Thor agreement at this point, so they would have defended Blue Streak; but the issue of nuclear sufficiency may have seen Mountbatten and Templer question the programme. It can only be speculated upon as to why this commitment suddenly appeared as the White Paper went before the politicians. Perhaps Sandys thought there would be less detailed scrutiny at Cabinet level. It is noticeable, however, that in the House of Commons debate on the White Paper, Sandys never said that Britain was building its own ballistic missile. Even when Ward and the Minister of Supply, Aubrey Jones, defended the White Paper, there was no mention of Blue Streak.[614] Blue Streak

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[609] Sandys' personal copy of *Britain's Contribution to Peace and Security*; DSND 6/52.
[610] 'Timetable for the 1958 Defence White Paper and 1958/59 Defence Estimates: 5 December, 1957'; DEFE 7/986.
[611] 'Defence White Paper, 1958 - 1st Draft: 13 January, 1958'; further draft of 20 January, 1958; 'Defence White Paper, 1958: 22 January, 1958'; DEFE 7/986.
[612] Printed drafts of 29 and 31 January, and 3 February; DEFE 7/987.
[613] 'Defence White Paper, 1958: 5 February, 1958'; CAB 129/91, C (58) 30; 'Defence White Paper, 1958: 6 February, 1958'; CAB 129/91 C (58) 34 and 'Defence White Paper, 1958: 8 February, 1958'; CAB 129/91 C (58) 39.
[614] Hansard HC vol 583 cols 382-501 (26 February, 1958) and HC vol 583 cols 554-681 (27 February, 1958).

does not appear to have been publicly mentioned at all until late-June, when Sandys said production was on-going and that its independence would be guaranteed by British-built warheads.[615]

This becomes even more strange when you consider that, although it had sailed through the autumn and winter, problems with Blue Streak had become apparent during the period. In August the Defence Research Policy Committee claimed reductions in research and development spending had added six months to its timetable, and Jones worried in October that Blue Streak would probably go over budget by 'at least 100%', as every American missile programme had.[616] Even the Ministry of Defence thought that progress could not be increased without resources 'from elsewhere'.[617] The result of this was that Blue Streak entered 1958 in crisis.[618] Sandys had asked around for ways of accelerating the programme, but no solutions were forthcoming, and securing 'some form of exceptional priority' for Blue Streak was not considered politically or economically viable.[619] When Brundrett told Sandys that Blue Streak would probably end up costing twice its original estimates, Sandys responded by asking him to re-consider the V-bomber requirements.[620] He also asked Jones to consider whether Britain's requirements could be met by manufacturing American weapons, such as a land-based Polaris.[621]

Had all of this been made clear during the White Paper drafting process, it is likely that Blue Streak would have been questioned. Is it possible that Sandys had minimised (or even concealed) any concerns over this period when they might have been pounced upon, knowing that he could then work around them? He had conceded important parts of his strategic concept in the 1957 White Paper only to then attempt to re-direct them towards his original intentions, so this would represent a consistent approach to the policy-making process. If this was the case, then Sandys' initial attempts to deal with

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[615] Hansard HC vol 590 cols 396-97 (25 June, 1958).
[616] 'The Blue Streak Development Programme: Note by the Minister of Supply, 6 August, 1957; DEFE 7/2246; Jones to Sandys: 18 October, 1957; DEFE 7/2246.
[617] E. C. Williams to Sandys: 22 October, 1957; DEFE 7/2246.
[618] Clark, *Nuclear Diplomacy*, p. 169; Groom writes that by January a likely increase in costs was 'worrying officials'; Groom, *British Thinking About Nuclear Weapons*, p. 257.
[619] 'Observations on the Blue Streak Programme: W. H. Wheeler' (no date is listed, but Jones referred to the report on 3 January 1958, so Sandys must have asked Wheeler before the New Year'; D. W. Ward to Brundrett: 8 January, 1958; DEFE 7/2246; Jones to Sandys: 3 January, 1958: DEFE 7/2246.
[620] Brundrett to Sandys: 3 January, 1958; DEFE 7/2246; D. W. Ward to Brundrett: 7 January, 1958; DEFE 7/2246; Clark, *Nuclear Diplomacy*, p. 161.
[621] Jones to Sandys: 24 January, 1958; DEFE 13/193.

this uncertainty would confirm points previously made in this thesis. His willingness to consider American delivery systems at this point - months before his brief enthusiasm for Thor - strengthens the idea that his concept of nuclear independence was based upon the possession of worthwhile strike capabilities, and it was only Jones' claim that the United States would refuse to sell Britain the lightweight warheads it would need 'without strings' that ruined that particular solution, as this would have prevented Britain from exercising full control over its weapons.[622] That he sought to re-open the V-bomber programme in order to release resources for Blue Streak also strengthens the contention that he had Blue Streak in mind when he accepted reduced numbers.[623] This is also the case for his attempts at re-opening the fighter issue that had seemingly been settled only days before. Much like how he had assigned aircraft carriers to anti-submarine duties, this was further evidence of Sandys attempting to re-write policy with the aim of furthering his original policy preferences - in this case maintaining an effective ballistic missile system under full British control. That he spent January frantically addressing issues with Blue Streak whilst failing to mention it during the White Paper drafting process, only to then include it in February having resolved none of these problems, also suggests that he had sheltered it from scrutiny, and possibly even attempted to withhold crucial information from other leading policy-makers.

This is further supported by the fact that he did not make any formal attempt to solve the issue until well after the White Paper had been published. Tuttle, now Deputy Chief of the Air Staff, warned that Air Ministry in February that development had reached a 'dangerously slow pace'.[624] This would have been another opportune moment to consult the Cabinet and the Defence Committee, but Sandys did not arrange crisis talks until April when he chaired a meeting of officials from the Ministry of Defence and the Ministry of Supply, with Tuttle representing the Air Staff. These Blue Streak-friendly policy-makers arranged for a working party to be set up under Powell with representatives from those ministries already present; for Sandys to be kept informed of any threatened delays stemming from decisions 'outside the Ministry of Supply'; and for Jones to prepare a paper 'with a view to an approach by the Minister of Defence to the

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[622] Jones to Sandys: 24 January, 1958; DEFE 13/193.
[623] Brundrett wrote to Sandys on 2 January about the basic need to 'get the emphasis shifted from the manned aircraft to the unmanned missile field'. This may have prompted Sandys into action, but he would not have taken much convincing; Brundrett to Sandys: 2 January, 1958 cited in Clark, *Nuclear Diplomacy*, p. 166.
[624] 'Blue Streak Progress: Note by the Deputy Chief of the Air Staff, 11 February, 1958'; AIR 19/813.

Chancellor'.[625] Tuttle was frank in his report to the Air Ministry that the 'only object in having the meeting was to endeavour to accelerate the time by which the R.A.F. might have BLUE STREAK in operational use', and that the working party would 'make recommendations with a view to accelerating the date'.[626] We have seen with McGrigor and Dickson finding common ground at the expense of the Army during the Radical Review that making mutually beneficial arrangements was not entirely new to the defence policy-making process; but now three significant ministries were colluding to ensure Blue Streak entered service, thereby undermining the point of separate Service Ministries existing to defend their sectional interests by binding them to the Ministry of Defence position.[627]

The Ministry of Supply and Air Ministry listed measures to hasten development, such as using American testing facilities as well as just buying components (from guidance systems to full engines), but were stuck for solutions, particularly when the Air Ministry raised the cost of the proposed underground launching sites.[628] The final report of the Working Party, compiled by Chilver, was equally short of ideas beyond deploying hand-made 'unproved production rounds' ahead of schedule.[629] The report created an appropriate atmosphere of crisis, and Sandys called Jones and Ward (as well as their civil servants and advisors) in to remind them that Britain had a policy of 'maintaining continuously in being an independent element of British nuclear retaliatory power', making it 'essential for Britain to develop a major rocket project of her own'.[630] This appears to have been the meeting where Sandys' turned to Thor, as it was suggested that the loosening of the McMahon Act might allow Britain to buy them 'without strings'. However, as the previous section argued, this was explicitly connected to the idea that it remained 'necessary to expand British development capacity', and that any alternative to

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[625] 'Meeting of Minister of Defence with Minister of Supply on 11 April, 1958'; DEFE 7/2246.
[626] 'Blue Streak: Note by the Deputy Chief of the Air Staff, 11 April, 1958'; AIR 19/813.
[627] In a June report on Blue Streak, Tuttle urged that 'the views expressed in the paper and many of the figures should not be used outside the Air Ministry... There is clearly a course between having so few missiles that development could be said to be not worthwhile, and asking for so many that Ministers might think the bill impossibly large'; 'Deployment of Blue Streak - Size of Force Required: Note by the Deputy Chief of the Air Staff, 12 June, 1958'; AIR 19/813.
[628] 'Measures Suggested for Hastening the Programme: Note by the Ministry of Supply, 23 April, 1958'; DEFE 13/193; 'Blue Streak Launching Sites: Note by the Air Ministry, 5 May, 1958'; DEFE 13/193.
[629] 'Report of the Working Party on Blue Streak: 6 June, 1958'; DEFE 13/193.
[630] 'Blue Streak: Meeting of the Minister of Defence, with the Secretary of State for Air and the Minister of Supply on 16 June, 1958'; DEFE 13/193.

Blue Streak would have to retain its main qualities: 'its range, its invulnerability against attack and its independence'.[631]

Sandys agreed to ask the Chancellor for 'the provision of more test facilities' and to suggest ways of hastening deployment.[632] This approach to the Treasury had been two months in the making, and Sandys again made sure to emphasise the central tenets of his belief system in making the case for Blue Streak. The first draft put to Sandys said that by the mid-1960s 'the deterrent value of the V Bomber Force, even with the propelled bomb, will be declining owing to the introduction in the interval of a Russian ground-to-air missile defence system'. Sandys struck a line through the mention of propelled bombs and referred to 'the growth in the interval of the Russian missile defence system'.[633] By removing the temptation to depend on air-to-surface missiles, Sandys removed the notion of continuing to depend on manned bombers, which was strengthened by the suggestion that the Soviets already had effective counter-measures. The need for Blue Streak was also stressed in one of the concluding sections that originally described it as being of 'cardinal importance', calling its introduction by 1965 a 'vital factor'. Sandys changed this so that Blue Streak became 'one of the central features in our whole defence concept', with timing being upgraded to a 'critical factor'.[634]

The second, expanded draft received similar alterations. Where it was suggested that Britain 'ought to get an effective ballistic missile into service as soon as possible', Sandys said Britain 'must' do so. This draft ran for five pages, and Sandys simply removed three of them. The paragraph including the words 'expensive as it is' was erased, as were suggestions that the amended McMahon Act might allow for reduced expenditure. He also removed the section debunking 'the idea that we can discontinue our own rocket programme'; all mention of adopting American-made weapons; and the case against not accelerating the Blue Streak programme, and against using a lighter

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[631] *Ibid.*; William Cook, who ran the engineering and development side of the Atomic Energy Authority (and who had led the thermonuclear bomb project), advised the working party that an independent Thor was the 'surer method of having early a British ballistic missile', so Sandys asked Brundrett and Powell to 'consider its implications'; 'Working Party on Blue Streak: Note by William Cook, August, 1958'; DEFE 7/2246; Cook to Sandys: 15 July, 1958 and D. W. Ward to Powell: 16 July, 1958; DEFE 7/2246.
[632] 'Blue Streak: Meeting of the Minister of Defence, with the Secretary of State for Air and the Minister of Supply on 16 June, 1958'; DEFE 13/193.
[633] 'Letter from the Minister of Defence to the Chancellor of the Exchequer (Draft)'; DEFE 13/193.
[634] *Ibid.*

warhead, was also taken out.[635] As had been the case the previous summer, Sandys may have wished not to cast doubts on the programme where they did not already exist. But in removing passages that actually defended Blue Streak, albeit whilst conceding that there were reasons to doubt it, the implication is that should scrutiny have been applied to Blue Streak at this stage then it would have been difficult for the government to come down on its side. If this was the case it would represent a striking example of both Sandys' underhand methods and, as was made clear in this version of the letter, his unwavering belief that 'our right course, if we want to preserve an independent deterrent, is to continue BLUE STREAK and to accelerate the programme as now proposed'.[636]

When Sandys circulated his September memorandum on scaling back Blue Streak and concentrating on its successor whilst using an independent version of Thor, he cited the 'favourable developments' brought about by the relaxation of the McMahon Act that assured Britain 'full information' about the manufacture of lightweight warheads as well as making it possible 'that we may now be allowed to acquire American rocket tails without political restrictions'.[637] It has been shown how Sandys saw this as leading to the possibility of a 'more advanced weapon' developed in partnership with allies, thereby not really representing a relaxation of his policy preferences; but the Ministry of Defence seems to have entered into a period of doubt at this point, and Sandys had to steady the ship. This had been partly prompted by the nuclear sufficiency debates, with the War Office questioning the independent British nuclear capability in July, and calling for the total reverse of Sandys' policy preferences by assigning lowest priority to 'any weapon which would only be used in global war'. Jones also thought Britain was devoting too many resources to 'long-range nuclear weapons', and echoed calls for a strategic re-appraisal.[638] The Air Ministry was still in full agreement with Sandys, who told the Defence Board that:

> Britain must continue to make an independent contribution to the nuclear retaliatory power of the West... Moreover, unless the independent British deterrent were to be allowed to lapse, we must in due course provide

[635] 'Letter to the Chancellor of the Exchequer (Draft 2)'; DEFE 13/193.
[636] *Ibid.*; Sandys to Derick Heathcoat-Amory: 14 July, 1958; DEFE 13/193.
[637] 'Ballistic Rockets: Memorandum by the Minister of Defence, 8 September, 1958'; CAB 131/20, D (58) 47.
[638] 'Extract from Defence Board Conclusions: 1st Meeting, 31 July, 1958'; DEFE 7/2300.

> ourselves with a ballistic rocket, under our own control, to succeed the bomber aircraft. It was not, in his opinion, necessary that the rocket should be made in Britain, provided its use was not restricted by 'political strings'.[639]

He added that discussions with the Americans had led him to believe that Thor might be available free of conditions along with information to design a suitable British warhead. If this could be arranged, it might be possible to 'drop' Blue Streak and join the United States in developing a 'more advanced solid propellant missile of the POLARIS type'.[640] Sandys considered Thor so long as it did not prevent Britain building its own ballistic missile, but that that weapon should have been identified as a solid fuel weapon at this early stage connects to Sandys' conduct during the debates over Polaris. Like Sandys, Powell also bound the use of Thor to the development of Blue Streak's successor, advising that Blue Streak continue until 'favourable answers' from the United States made this successor weapon a possibility. Interestingly, Powell also refers to any successor in terms of it being a solid fuel weapon. Blue Streak was ruled out for conversion to solid fuel because Britain could not make a light enough warhead, but he specified a 'more advanced missile of the POLARIS type using solid propellant'.[641] If in August the Ministry of Defence identified solid fuel as the future basis of any ballistic missile, Sandys and the department suddenly becoming hostile to it at the same time as they rediscovered their enthusiasm for Blue Streak (enabled by the implementation of non-specific technological developments) is highly questionable.

The solid fuel issue appears to have been solved when its effect on Blue Streak was given proper consideration. Chilver wrote to Powell on Sandys' behalf asking 'are we clear why we are so anxious to have a solid-fuel rocket?' He cited range and development issues, but the letter revealed Sandys' policy preferences as being decisive when it asked:

> I have seen no proper examinations of whether it would be cheaper or less vulnerable (apart from the possibility of launching it from a submarine)...

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[639] *Ibid.*
[640] *Ibid.*
[641] Powell to Sandys: 6 August, 1958; DEFE 7/2246.

> To settle a policy will include deciding what we want in the long term, i.e. what we mean by "wanting to stay in the rocket business".[642]

Was this a concession that submarine-launched missiles were cheaper and less vulnerable than Blue Streak? Equally, was it an admission that 'official' Ministry of Defence policy was to back land-based ballistic missiles regardless, even if it meant pressing on with weapons utilising an inferior fuel source? It certainly indicates a discernible amount of bias towards Blue Streak within the department. Further evidence of this can be seen in a response to an early draft of Sandys' September memorandum prepared by Chilver. This said that 'If we can get suitable American rockets for our independent deterrent, we should give up the development of BLUE STREAK', but failed to link this move to the development of a successor weapon. This draft recommended the solid fuel Minuteman as the ideal weapon system for Britain, and even conceded that submarine-launched missiles had great advantages, albeit whilst claiming it would be wrong to 'rely wholly' on them when detection methods might improve.[643] E. C. Williams, the Scientific Advisor (Intelligence) at the Ministry of Defence, told Chilver 'I do not like this paper at all':

> The deterrent can only be considered independent if it is absolutely manifest that it is independent not only now but can remain so in the future... That means to say that it must be known that we retain in this country the capacity to carry on building deterrent vehicles and warheads even if a future American administration changes its mind.[644]

This may have been an influential intervention in terms of directing Chilver's draft towards its final form, as would warning against giving Ministers the impression that 'there is any cheap way of maintaining an independent British deterrent which must in the long run be a rocket'.[645] This might explain Sandys caveats for acquiring Thor 'without strings', but what about the move back towards Blue Streak in November?

Despite the low mood around the Ministry of Defence following the Washington talks and the doubts over Blue Streak, this was not reflected in Sandys' November

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[642] Chilver to Powell: 6 August, 1958; DEFE 7/2246.
[643] 'I.R.B.M. Policy (Draft): Undated, but likely late-August'; DEFE 7/2246.
[644] E. C. Williams to Chilver: 28 August, 1958; DEFE 7/2246.
[645] *Ibid.*

memoranda, nor in his conduct during this period. In mid-October Brundrett had said that Thor could fulfil Britain's requirements until 1968, but that the United States' decision to discontinue intermediate-range missiles meant that Britain would be unable to buy a successor. Working on the assumption that it would have to be land-based, he insisted that Polaris had too short a range, and that solid fuels were inherently inferior. He was therefore 'forced, with considerable disappointment, to conclude that... we should continue with Blue Streak'.[646] In response to this Sandys met his officials and made it clear that 'we could not guarantee the maintenance of an independent deterrent unless we went with BLUE STREAK'. Polaris' warheads were too small, and solid fuel weapons would remain inferior 'for some time at least'. It was therefore decided that policy should revert back to where it had stood in July when Sandys had asked the Chancellor to accelerate the Blue Streak programme.[647]

This uncertainty became truly problematic when Jones sent Sandys his 'personal thoughts' on Blue Streak, admitting he too only supported it reluctantly. Jones was of the opinion that the United States deterrent was all-powerful, and that Britain only needed its own nuclear capabilities for 'reasons of prestige and as an insurance policy'. Like Brundrett, Jones also discounted solid fuel missiles as an immediate solution; particularly Polaris, which he said was 'specifically designed for submarine use', and therefore of no use to Britain. However, he did recommend further investigation into solid fuels, suggesting that a programme of research and development should be undertaken with money from Blue Streak's budget.[648] This was a definite attempt to distance the Ministry of Supply from both Sandys' strategic concept and his unwillingness to consider solid fuel weapons. The real problem for Sandys, however, was that Jones sent copies of this letter to the service ministries. Having compromised their supposedly neutral role in the policy-making process by following Sandys' Blue Streak policies and colluding with him and the Air Ministry to ensure their success, by revealing this uncertainty to the Admiralty and the War Office, Jones was now aiding those departments that agreed with him that 'the main military objective of this country should be preparedness for limited war'.[649]

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[646] 'Ballistic Rockets: Memorandum by the Chief Scientist, Ministry of Defence, 14 October, 1958'; DEFE 7/2246.
[647] Record of a meeting at the Ministry of Defence: 14 October, 1958; DEFE 7/2246.
[648] Jones to Sandys: 15 October, 1958; AIR 19/813.
[649] *Ibid.*

Mountbatten used this information in a meeting of the Defence Board, where he tried to argue that whilst Blue Streak ought to continue, it should be reviewed within twelve months lest Britain commit itself 'irrevocably' to depending on it. He was clearly angling for Polaris, but Sandys closed the meeting by citing 'general agreement that a land-based rocket would be required to maintain an independent British deterrent'.[650] This failed to satisfy either party, and the following week Mountbatten, with Army support, questioned Sandys' policies on nuclear independence. Sandys claimed it was 'inconceivable that Britain would hesitate to use her own nuclear retaliatory power' if the United States abandoned Western Europe, making the retention of an independent nuclear capability 'no less important for the future than it was now'. Mountbatten made his 'national suicide' remark in response, and Sandys exploded:

> These so-called priorities had never been, and never could be, mutually exclusive... He did not believe that the anxiety shown by the First Sea Lord and the Chief of the Imperial General Staff was really concerned about our deterrent policy. In his view they were concerned lest the high cost of the deterrent should necessitate cuts in the conventional forces.[651]

He said that even if Blue Streak was cancelled in favour of an independent version of Thor, the British missile programme could not disappear as Thor would eventually need replacing. Even if its replacement was another American weapon, Britain would have to make that independent, so 'it was wrong to assume that, if we abandoned altogether our contribution to the nuclear deterrent, the resultant financial savings could be used to increase expenditure on conventional forces'.[652] This signalled that Sandys had re-discovered his enthusiasm for Blue Streak, and that he was not willing to allow his strategic concept to fail alongside it. He had explored alternative ways of providing Britain with a truly independent nuclear capability, but none of them had been suitable. Now he had to make sure Blue Streak could proceed as planned.

Sandys' Final White Paper

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[650] 'Defence Board minutes: 20 October, 1958'; AIR 19/813.
[651] 'Meeting of the Minister of Defence with the Chiefs of Staff: 28 October, 1958'; DEFE 7/2300.
[652] *Ibid.*

Sandys' determination that Blue Streak should succeed can be seen in his November memoranda. These ought to have reflected the climate of doubt and confusion that had surrounded the programme, but Sandys was once again able to override any uncertainty and present an image of calm, resolute support by altering the more balanced proposals put to him by Chilver. The first document Chilver produced did reflect the uncertain climate. The Washington talks were framed as a disappointment, and the plan was for Sandys to say 'I am reluctantly forced to the conclusion that the revised policy I outlined [in September] is not feasible'. Blue Streak was backed in this draft, and although Polaris was noted to have an inadequate range, it was suggested that in light of emerging alternatives Blue Streak be kept 'under review, in common with the rest of our programme'.[653] The official files do not contain any subsequent drafts, but what Sandys circulated was drastically different in both content and tone. There was no reluctance in his memorandum, and whilst Chilver had said Blue Streak could utilise 'anti-defensive measures or other improvements', Sandys implied that he had been made aware of these in Washington (and suggested as much in the Defence Committee meeting). The section on Polaris made up of weak arguments, as discussed in the previous section, was his own inclusion. Finally, Sandys' memorandum simply stated that he had 'come to the conclusion that, if we wish to maintain an independent British contribution to the nuclear deterrent, after the mid-sixties, we must proceed with the development of BLUE STREAK'.[654]

The main difference between what Chilver and Sandys produced is the certainty of Sandys' version. There was no point keeping Blue Streak 'under review' because to Sandys it was indisputable that a land-based ballistic missile was the ideal nuclear delivery system, and to keep the question open 'in common with the rest of our programme' was absurd. From Sandys' perspective, Blue Streak was the rest of the programme, aspects of which were only left open in order to ensure that the central idea of the 1957 White Paper - that Britain maintain a viable nuclear strike capability in order to deter Soviet aggression - could become a reality. Sandys' entire strategic concept was based upon the idea of ballistic missiles having mastery of all other weapon systems, which could be (and should be) sacrificed in order to make Blue Streak a reality. Britain failing to press ahead with Blue Streak as recommended would

[653] 'Ballistic Rockets: Memorandum by the Minister of Defence, October, 1958 (Draft)'; DEFE 7/2246.
[654] 'Ballistic Rockets: Memorandum by the Minister of Defence, 3 November, 1958'; CAB 131/20, D (58) 57; CAB 131/19, D (58) 24th Meeting: 5 November, 1958.

have meant it ceased to possess a viable nuclear strike capability beyond the lives of the V-bombers, thereby making his entire defence review redundant.

We have seen in relation to Polaris how Sandys managed Blue Streak through the end of 1958, with his second November memorandum reiterating his support for the programme, albeit whilst appearing to support watching Polaris' progress. Clark has said that by this point 'it was apparent that Blue Streak would proceed but on a provisional basis only', citing Macmillan's 8 December wish to 'pause for a year or so, until we are in a better position to make a firm choice'.[655] But this does not seem to have been embraced by the Ministry of Defence. As far as they were concerned, the immediate crisis of confidence had passed. This can be seen in early drafts of the 1959 White Paper which were prepared in late-1958. The 'first shot' at a draft, produced in late-November, mentioned that Britain had a 'need for ballistic rockets' after the V-bombers expired, but could only note in the margin 'Will it be BLUE STREAK?'[656] By Christmas (despite Macmillan's intervention) this had become a detailed passage about the limited life-spans of the V-bombers and Thor, adding that 'Work is therefore continuing on the development of the British ballistic rocket BLUE STREAK', and only mentioning Polaris with more hollow support on condition that 'available resources were unlimited'.[657]

However, as noted in the previous section, Sandys had agreed to review the future of Britain's nuclear deterrent, and Powell worried that such a definite statement in favour of Blue Streak 'prejudges the outcome'. This was standard procedural advice from Powell, but he revealed the Ministry of Defence's interest when he added 'This enquiry will, in my view, take something like six months, but so long as BLUE STREAK continues in the meantime, there is no need to hurry it and, indeed, every reason against hurry'.[658] This was because whilst Blue Streak continued its development it swallowed up further resources. This made it more difficult to cancel as wasted time and expenditure would (and did) prove embarrassing for the government, and Sandys' second November memorandum going further into the costs - both financial and political - of Blue Streak than his previous papers is no coincidence, even though he had previously been reluctant to raise the expenditure issue lest it attract negative attention.

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[655] Clark, *Nuclear Diplomacy*, p. 174.
[656] 'Defence White Paper, 1959 (Draft): 24 November, 1958'; DEFE 7/991.
[657] 'Defence White Paper, 1959 (Draft): 23 December, 1958'; DEFE 7/991.
[658] Powell to L. J. Sabatini: 6 January, 1959; DEFE 7/991.

This memorandum now admitted that Blue Streak involved 'heavy expenditure', about £480 million (£200 million on development, the rest on production and deployment), but adding that this could only be understood in relation to the costs of the V-bombers, in which case it was 'really not more than might reasonably be expected'. What had already been 'spent or committed' was stressed, knowing that the government would find it difficult to justify writing-off large amounts of capital.[659]

This echoed Jones' qualified support in October, which included the fact that 'we have gone some way with Blue Streak' as a reason against cancellation; but Sandys presented his renewed support as owing more to the inferiority of alternative systems, with his concluding remarks claiming 'We have already spent or committed £50m. on BLUE STREAK. It would obviously not make sense to stop the project now and then quite likely have to start it up again in a few years' time'.[660] This conceded the practical case against writing-off previous expenditure, which could imply reluctance; but his policy preferences became clear when he stated his belief that Britain would end up having to rely on Blue Streak anyway in the same paragraph that admitted Polaris might be viable 'If we were starting from scratch' and could wait three years for its 'prospects' to be realised.[661] When read as one statement this displays a marked cynicism towards Polaris, as well as demonstrating his well-established belief in land-based ballistic missiles as the inevitable weapon of choice for anybody actually wishing to retain a viable nuclear delivery system.

This explains Sandys' relaxed attitude towards the review, which was to work on the basis of existing British policies. These were currently in the process of being re-stated by Sandys in the upcoming White Paper, the next draft of which not only committed Britain to Blue Streak, but explained why submarine-launched and solid fuel systems were inferior to it 'from the operational or financial standpoint'.[662] The 1959 White Paper, *Progress of the Five-Year Defence Plan*, was a brief one, and the official files suggest that it did not undergo the same amount of deliberation as Sandys' previous White Papers. Both the Cabinet and the Defence Committee devoted little time to it,

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[659] 'Ballistic Rockets: Memorandum by the Minister of Defence, 16 November, 1958'; CAB 131/20, D (58) 63.
[660] Jones to Sandys: 15 October, 1958; AIR 19/813; 'Ballistic Rockets: Memorandum by the Minister of Defence, 16 November, 1958'; CAB 131/20, D (58) 63.
[661] 'Ballistic Rockets: Memorandum by the Minister of Defence, 16 November, 1958'; CAB 131/20, D (58) 63.
[662] 'Defence White Paper, 1959 (Draft): 8 January, 1958'; DEFE 7/991.

seeing only two printed proofs, and not insisting on any substantial alterations. The one change that the published version did make was the removal of any mention of alternatives to Blue Streak, which was described 'on present knowledge' as being 'the type of missile best suited to British needs'.[663]

Sandys justified this brevity in the defence debate by claiming that 'the policy approved by the House two years ago has proved itself to be sound and workable and has, therefore, not had to be changed'.[664] He ran through most of his policies in short order, but unlike the previous year, he sought to defend Blue Streak at length:

> Rockets - particularly long-range guided rockets with nuclear warheads - are, of course, expensive things. But the rocket is not a superfluous addition to our armoury. We must remember that the role of the ballistic rocket is to take the place of the V-bomber when it comes to the end of its operational life. If we did not make the rocket, we should have to develop and manufacture another generation of strategic bombers and provide the trained crews, airfields and control systems to operate them.[665]

He compared the cost of Blue Streak to another manned bomber, saying 'It follows that if we can afford a bomber deterrent now, we should be able to afford a rocket deterrent in the future', before responding to calls of 'How much?' by defending Blue Streak as 'the type of weapon which will best suit our needs'. To convince the House of this he then claimed 'The Americans are at present putting their main effort into liquid-fuel intercontinental land-based missiles. We believe that they are quite right, however, if they can afford it, also to develop alternative methods'.[666] The United States was certainly developing liquid fuel weapons, but their 'main effort', as Sandys had been told in Washington, was directed towards the solid fuel Minuteman and Polaris.

He had suggested in his opening remarks that critics of his cuts to non-nuclear forces failed to recognise that 'the circumstances in which we might have to carry out military operations entirely on our own, without allies, are today very limited', adding 'I find it

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[663] 'Defence White Paper, 1959: 30 January, 1959'; CAB 129/96 C. (59) 12 and 'Defence White Paper, 1959: 5 February, 1959'; CAB 129/96 C. (59) 14; CAB 131/21, D. (59) 3rd Meeting: 4 February, 1959; Sandys' personal copy of *Progress of the Five Year Defence Plan*; DSND 6/52.
[664] Hansard HC vol 600 col 1131 (25 February, 1959).
[665] Hansard HC vol 600 col 1136 (25 February, 1959).
[666] Hansard HC vol 600 cols 1136-38 (25 February, 1959).

hard to visualise any wars which we might have to fight alone without allies'.[667] Frank Beswick then asked from the Labour benches 'If that is the case with regard to conventional forces, in what circumstances does he think we are going to use the deterrent nuclear weapon independently of the U.S.A., and if not, what is the good of it?'[668] Beswick had been a pilot during the Second World War, and one of the British observers of Operation Crossroads, the post-war atomic bomb tests over the summer of 1946.[669] Yet Sandys could only mock him about 'joining the Liberal Party' (who rejected the need for an independent British deterrent) and refusing to be drawn 'on a major issue of that kind' in reply to an intervention - that is to say, without having prepared for it.[670] He was asked again 'under what circumstances he conceives the use of these weapons by Britain independently of their use by other Powers?', to which he replied 'Does he say now that he does not agree with his party that we must have an independent nuclear deterrent?' The Speaker was asked then to intervene as 'he apparently refuses to answer a question of crucial significance', before Sandys said such questions were 'tedious' and refused any further interventions.[671]

Clark has suggested that Sandys' admission that he would 'continue to watch progress of other developments in America and elsewhere' demonstrates the 'qualified nature of the Government's commitment to Blue Streak'.[672] But read as a whole Sandys' speech can only be taken as a defence of Blue Streak, even if it appears from reading Hansard that he was keen to delve into the details of Blue Streak to avoid having to justify its strategic value. This is because. despite the fact that he refused to elaborate on the precise uses he had in mind for Blue Streak, he nevertheless stressed its independence, claiming that 'any other course would involve a wholly unjustifiable gamble' and that 'Thor is not an element of independent British nuclear power... it is certainly not a successor to the V-bomber'.[673] He may have been reluctant to make a definitive statement regarding Britain's wish to retain the capability to deter the Soviet Union unilaterally - in the era of interdependence it is understandable that the Minister of Defence was unwilling to suggest that this might be a necessity, even though it made it difficult to defend reductions in other areas - but we have seen that this was definitely

[667] Hansard HC vol 600 col 1132 (25 February, 1959).
[668] Hansard HC vol 600 col 1136 (25 February, 1959).
[669] 'Back from Bikini - Frank Beswick M.P.'; *The Spectator*: 12 September, 1946.
[670] Hansard HC vol 600 cols 1136-37 (25 February, 1959); for the development of the Liberal Party's policies, see: Groom, *British Thinking About Nuclear Weapons*, pp. 145-46, p. 231, and p. 492.
[671] Hansard HC vol 600 col 1138 (25 February, 1959).
[672] Clark, *Nuclear Diplomacy*, p. 175.
[673] Hansard HC vol 600 col 1140 (25 February, 1959).

Sandys' intention, which shows that his support of Blue Streak, and by extension Britain's independent nuclear capability, was by this point decidedly unqualified.

Labour tried to exploit this (public) incoherence by questioning both Blue Streak and Sandys' approach to it, with George Brown, Labour's defence spokesman, focussing on the idea of 'present knowledge' determining its future:

> I am bound to say that I am surprised at the extent to which the right hon. Gentleman ties himself to land-based static launchers of the nuclear deterrent in the future, and why he rules out seaborne solid fuel rockets. The continuance of the V-bombers with their standoff bomb will carry us a long way ahead, probably quite long enough to reach out to when the seaborne solid fuel invulnerable mobile rocket arrives. Why does the right hon. Gentleman rule them out as firmly as he does?[674]

The next day Sandys defended an independent nuclear capability on the grounds that the United States appreciated its contribution and because it might 'in certain circumstances, be a decisive factor in preventing war by miscalculation'. He had touched upon the idea of nuclear sufficiency forcing the United States out of Western Europe, but failed to clarify his position by saying such a retreat was 'inconceivable', and still refusing to address the prospect of unilateral action.[675]

He then turned to Blue Streak as a delivery system, admitting that Polaris' mobility was one of its 'very great attractions', but adding 'it should not be assumed that the removal of the deterrent from this island would in practice protect our population from attack'. He said Polaris' warhead was too small, but then introduced a new concern by suggesting the missile itself was too small to accommodate 'means of evading or foxing the anti-missile missile which is coming up to destroy it', which were important if 'we wish our rocket to remain an effective deterrent for a reasonable time'.[676] Sandys had suggested the incorporation of these in his November memoranda, and he does appear to have been genuine in believing that they would increase in importance; but as with the question of lightweight warheads and solid propellants, his inability (or

[674] Hansard HC vol 600 col 1162 (25 February, 1959).
[675] Hansard HC vol 600 col 1418-19 (26 February, 1959).
[676] Hansard HC vol 600 cols 1422-23 (26 February, 1959).

unwillingness) to apply his usual long-term outlook to specific technological developments that ran counter to Blue Streak's best interests raises questions.[677]

This is where Clark's argument proves problematic. The government (Macmillan and other leading policy-makers), might well have remained uncertain about Blue Streak; but this does not apply to Sandys, and the question of counter-measures reveals how he was capable of holding contradictory beliefs where it suited Blue Streak. When Britain acquired Polaris it eventually developed systems aimed at confounding any Soviet counter-measures. It could be argued that the cost of these counter-measures, and the fact that they reduced its range, validated Sandys' concerns.[678] However, given the information available to him at the time, he had little reason to believe that this would prove to be the case, and in claiming only something the size of Blue Streak could carry electronic counter-measures, Sandys was effectively discounting further development of the Polaris system, as he had over the question of solid fuels.[679] There was no reason for Sandys to believe that only Blue Streak could accommodate counter-measures, and although Polaris was adapted with some difficulty, it still managed to incorporate them and remain viable. That is not to say that the case could not have been made, or that Sandys would not have felt confident making predictions about the future of unmanned weaponry; but by this point he had been thinking about the next phase of missile development for fifteen years, so he was either satisfied that missile development had peaked, or he was being disingenuous to protect Blue Streak. Nevertheless, it had survived another immediate crisis, and the review of deterrent policy could begin.

The Nuclear Deterrent Study Group and Emerging Alternatives

[677] To give one example, in a memorandum on anti-aircraft missiles circulated at the height of the Blue Streak debate, Sandys suggested that they offered 'the only hope of defence against the ballistic rocket'; 'Anti-Aircraft Missiles: Memorandum by the Minister of Defence, 14 November, 1958'; CAB 131/20, D. (58) 67; Brundrett may have been influential in convincing Sandys that it was 'technically feasible' to destroy a ballistic missile in flight, although he himself had decided by the end of 1959 that it was unlikely; see: Stocker, J., *Britain and Ballistic Missile Defence: 1942-2002* (London: Frank Cass, 2005), pp. 64-74.

[678] See: Dillon, G. M., *Dependence and Deterrence: Success and Civility in the Anglo-American Special Nuclear Relationship, 1962-1982* (Aldershot: Gower, 1983), pp. 102-24; Grove, *Vanguard to Trident*, p. 348; Stocker, *Britain and Ballistic Missile Defence*, pp. 136-38.

[679] Sandys had been told in Washington, where it was suggested that Blue Streak could utilise a lighter warhead to make room, that even Thor could see its weight drastically reduced by the simple use of a re-designed nose-cone; 'Co-operation in Missile Development (2): 24 September, 1958' in 'Record of Meetings... Washington, D. C.: September 22-25, 1958'; DSND 6/37.

In late-March Powell wrote to Sandys proposing that Blue Streak's future be debated by representatives from the Foreign Office, the Treasury, the Ministry of Supply, the Atomic Energy Authority, and the Army. He wanted to leave the Air Force and the Navy out because they were 'expected to have a bias', although he would consider including them both instead of the Army, lest their support be pursued. There is some indication that Powell was distancing himself from previous Ministry of Defence thinking at this point, particularly in his reluctance to include Brundrett. Brundrett was the leading scientist in the defence policy-making process, but Powell said 'he is generally known to hold certain strong views on the subject', and proposed merely to keep him informed.[680] It may have been the case that the government maintained 'qualified' support for Blue Streak, but Sandys position was made clear in May when the Chiefs of Staff and the Cabinet Secretary began wondering why nothing had been done. Powell asked Sandys for his authority to proceed because, despite initially agreeing to the study, he had, in Powell's words, 'subsequently asked me to do nothing, in order to avoid casting doubt on the future of BLUE STREAK'.[681] The official files do not appear to contain any written order to this effect, even though word of this had reached Lambe, so it could have been done informally; but this was Sandys' most overt act in defence of Blue Streak to date. It was one thing trying to manipulate White Papers, to depend on dubious arguments, and even to collude with other departments; but actively trying to prevent the study group from being able to potentially expose Blue Streak was next-level duplicity, and once again suggests that he was worried that it could not survive government scrutiny.

Powell convened the study group in June, but with Brundrett and all three services present alongside the other institutions, and by July detailed terms of reference were set.[682] The wish for Britain to remain capable of acting in isolation was kept in place, and the following technical considerations were listed:

1) The ability to deter the Soviet Union (although an ability to strike at China was an advantage if not too costly) was the primary intention.
2) It would most likely be used against cities.

[680] Powell to Sandys: 23 March, 1959; DEFE 7/2300.
[681] Powell to Sandys: 8 May, 1959; DEFE 7/2300.
[682] 'British Nuclear Deterrent Study Group - Composition and Terms of Reference: Note by the Permanent Secretary, Ministry of Defence, June, 1959'; DEFE 7/2300.

3) There was a need to keep vulnerability so low that even a much larger Soviet nuclear capability could not expect to eliminate Britain's retaliatory capability in any preventative attack.
4) The government had to maintain absolute certainty over final launching control, which had to be available in the shortest time possible.[683]

The summer recess intervened, but when the policy-making process resumed in September, Sandys received news from Jones that the main contractor for Blue Streak, de Havilland Propellers, expected work to cost 'substantially more' than had been agreed.[684] Proving that collusion between the ministries was a thing of the past, Jones also sent this news to the Treasury, and the Chancellor let both of them know that there was no more money 'even if corresponding savings are found elsewhere in your programmes'.[685] Jones claimed to have done everything possible to keep costs down, and suggested backing Blue Streak until its future had been decided.[686] This was accompanied by a more direct letter from Sandys regretting the 'inevitable overspending', but backing the programme at least until after the coming election.[687] Sandys had started to be honest about the costs of an independent nuclear capability, but he still claimed the Ministry of Defence could account for it, and although he had previously said an independent nuclear capability was not cheap, overspending being described as 'inevitable' represented a major shift, the logic of which insulated Blue Streak from any financial arguments. This may have been what the Chancellor had in mind when recommending freezing expenditure, as mounting costs could well have forced Sandys to shred the rest of Britain's military capabilities; something which, if his actions during the Radical Review were anything to go by, he would have been willing to consider.

In mid-September the study group reported on possible alternatives to Blue Streak, and the submarine-launched missile appears to have been the most highly thought of owing to its diversity of approach paths, its ability to fire with little warning from the

[683] 'British Nuclear Deterrent Study Group - Task of British Controlled Contribution to Nuclear Deterrent: Note by the Joint Secretaries, 17 July, 1959'; DEFE 7/2300.
[684] Jones to Sandys: 1 September, 1959; DEFE 7/2247.
[685] Heathcoat-Amory to Jones: 8 September, 1959; AIR 19/813.
[686] Jones to Heathcoat-Amory: 15 September, 1959; DEFE 7/2247.
[687] Sandys to Heathcoat-Amory: 15 September, 1959; AIR 19/813.

Soviet coastline, and its ability to go undetected.[688] Unfortunately for Sandys, his influence over the policy-making process was severely depleted following the October 1959 general election, after which Macmillan moved him back to the Ministry of Supply with specific orders to break it up and form a Ministry of Aviation to rationalise the failing aircraft industry.[689] He would still have a voice in the defence debates in this role, which was a task he was suited for; but there is also some suggestion that Sandys' approach to policy-making had worn thin at the Ministry of Defence. His successor, Harold Watkinson, recalled that his first acts as Minister of Defence were to inform the Chiefs of Staff that he saw them 'not only as my advisers but my trusted colleagues whose advice I am not likely to disregard', and to replace the rectangular table Sandys had used to confront his advisors and express 'the dominance of the political arm of the Ministry' with an oval table to foster a more cordial atmosphere.[690]

Days after the election, Brundrett circulated studies completed by the Joint Global War Study Group that carried troubling conclusions for Blue Streak. The first report on submarine-launched systems concluded that it would continue to be a 'matter of the greatest difficulty to detect missile firing submarines at sea', and that 'on a missile for missile basis', Polaris' ability to cause the desired amount of damage to Soviet cities was 'comparable with that of Blue Streak'.[691] The second report stressed the importance of invulnerability, upon which the 'credibility of the deterrent' was said to depend. Here 'bombers in the air or submarines at sea' were said to possess an advantage over land-based ballistic missiles as control over the latter could not be delegated. In addition to this, concerns were raised that even the use of hardened underground silos might not reduce Blue Streak's vulnerability, as there could still be a period where the lids were

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[688] 'British Nuclear Deterrent Study Group: Possible Future Nuclear Deterrent Weapon Systems, 15 September, 1959'; DEFE 7/2216.

[689] 'If anyone can tackle the job, Duncan Sandys is the man'; 18 October, 1959; Catterall, *The Macmillan Diaries: 1957-66*, pp. 251-52; Macmillan, H., *Pointing the Way: 1959-61* (London: Macmillan, 1972), p. 19; see also: Horne, *Macmillan: Volume II*, p. 215; Macmillan had written in his diary that Sandys wanted to be Foreign Secretary post-victory, but was happy to stay at the Ministry of Defence provided he could force through a 'complete reorganisation, and centralisation of the Higher Ministerial control and commands', although Macmillan expected this to prove 'full of difficulties'; 16 September, 1959; Catterall, *The Macmillan Diaries: 1957-66*, p. 247.

[690] Watkinson, H., *Turning Points: A Record of Our Times* (Salisbury: Michael Russell, 1986), pp. 107-8 and pp. 112-13; Mountbatten revelled in this new atmosphere, writing to his wife that Watkinson 'gets advice with a single voice through me, instead of the many rival views Duncan used to get'; Ziegler, *Mountbatten*, pp. 580-81; Baylis writes that Watkinson 'In contrast to his predecessor... had become convinced that British policy had become over-dependent on nuclear weapons and he wanted to alter the balance in favour of conventional capabilities'; Baylis, *Ambiguity and Deterrence*, p. 307.

[691] 'The Influence of Nuclear Missile Firing Submarines on the Nuclear Exchange: Report by the Joint Global War Study Group, 9 October, 1959'; DEFE 7/2300.

open but the missiles had not 'reached sufficient height to be immune from the blast'.[692] The third report did not recommend any particular system, but in concentrating on the likely nature of a Soviet attack on any land-based deterrent in Britain, its conclusions could not have failed to have an effect on policy-makers. It predicted that in neutralising 100 hardened Blue Streak silos, the Soviet Union would probably have to use three missiles per site, each carrying an eight megaton warhead. Blue Streak's supporters had considered such a possibility during the debates of late-1958 and had satisfied themselves that the Soviet Union launching an attack of this scale was unrealistic, but it was difficult to avoid the startling result of this calculation, which was that 'Fallout from the scale of attack required to knock out 100 hardened missile sites widely dispersed over the UK would kill nearly everybody'.[693]

In a meeting of the study group convened specifically to discuss Blue Streak's vulnerability doubts were also raised that 'even if the political authority were given to fire on radar warning, there would be sufficient time to fuel and launch BLUE STREAK'. Despite Sandys' late-1957 claims that global war would only erupt after a prolonged period of international tension, concerns about Blue Streak's relative inability to remain on alert meant that it would in fact 'be more vulnerable to pre-emptive attack than the V-bombers'.[694] Meanwhile, the Admiralty returned to the fray, and Mountbatten told Powell that the United States was 'most anxious' to help Britain put its nuclear capabilities out to sea, to the point where he thought they would be willing to provide 'complete drawings' of their new Polaris submarines as well as the missiles 'if we wanted them'.[695]

The pressure was beginning to tell on Blue Streak, and Sandys wrote to the Chancellor to state its case once more. He said that any project of 'exceptional size and complexity' was bound to prove difficult, particularly for a country with no prior experience of producing unmanned weaponry, and his reasoning is worth quoting at length:

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[692] 'The Time Factor and the Deterrent: Report by the Joint Global War Study Group, 16 October, 1959'; DEFE 7/2300.
[693] 'Soviet Attack on Missile Sites in the United Kingdom: Report by the Joint Global War Study Group, 16 October, 1959'; DEFE 7/2300; Tuttle thought Blue Streak could have withstood anything up to a thousand megatons spread out across its underground sites, and that if the Soviet Union was launching such a massive bombardment as to be able to spare that amount of power for Blue Streak sites, Britain would be destroyed anyway; Tuttle to Ward: 15 October, 1958; AIR 19/813.
[694] 'British Nuclear Deterrent Study Group: Minutes of a Meeting Held in Sir Richard Powell's Room, Ministry of Defence, 10 November, 1959'; DEFE 7/2216.
[695] Mountbatten to Powell: 5 November, 1959; DEFE 7/2162.

> I think we must face the fact that whatever we do the maintenance of an independent British nuclear deterrent is bound to be a costly business, in terms of money. But the military power, security and influence which it gives us is out of all proportion greater than anything we could hope to obtain by devoting a similar sum to forces of any conventional kind. It may, of course, be argued that we should scrap Blue Streak and change over to some other form of nuclear deterrent. If there are convincing military reasons for doing this, which I doubt, we must, of course, be prepared to change horses, but I am sure that no change of this kind would be justified on financial grounds.[696]

This letter has been used by Clark to argue that Sandys was by this point accommodating himself to the prevailing mood around Blue Streak, writing 'What is telling about this [letter] is that Sandys, although a supporter of Blue Streak, accepted the basic premise that the decision must be taken on military, and not financial, grounds'.[697] This would seem to imply that Sandys was open to being convinced that alternative delivery systems were superior to Blue Streak; but this interpretation of Sandys' conduct fails to take into account the fact that he had always supported Blue Streak (or any advanced successor) on solely military grounds, working as it does from the premise that Sandys was motivated primarily by the pursuit of spending reductions. It is true that Sandys had, as we have seen, protected Blue Streak from difficult questions; but he did so as a result of his sincerely-held belief that only something like Blue Streak could guarantee Britain's future as an independent nuclear power. By starting from the interpretation of Sandys and the 1957 White Paper that casts his policies as being dictated by financial considerations, and accepting that his willingness to depend on the nuclear deterrent was merely a way of making his cuts an acceptable reality, his belief system and policy preferences become lost amongst the more quantifiable aspects of the policy-making process. It should be clear that Sandys was completely committed to the idea of land-based ballistic missiles providing the most suitable basis for that deterrent, and accepting that Blue Streak could only be discussed in military terms was not really a concession if, as the letter says, he doubted there were any convincing reasons to cancel the programme.

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[696] Sandys to Heathcoat-Amory: 25 November, 1959; AIR 19/813.
[697] Clark, *Nuclear Diplomacy*, p. 177.

Whilst he was still going to defend Blue Streak as a weapon system, Sandys did make the financial case for its retention, using the familiar refrain of sunk costs and prospective expenditure; but at the same time maintaining that Blue Streak was the best option:

> Whether we go in for rockets launched from the ground, from the sea, or from the air, the next generation of nuclear deterrent is likely to cost something of the order of £500M. We have already spent £50M on Blue Streak and it would be a large sum of money to wind it up. First firings are due next year... In all the circumstances, I hope that an early decision may be taken to go ahead with Blue Streak at the full planned speed; for, you will I am sure agree, that a policy of going slow on an urgent project is really a very poor form of economy.[698]

By now Sandys was becoming rapidly isolated. Even the Air Ministry, for long second only to Sandys in their devotion to Blue Streak, had moderated its position. In mid-1958, probably motivated by the minor crisis over Blue Streak, Boyle had approached Solly Zuckerman to chair the Strategic Scientific Policy Committee to advise on long-term trends in aerial warfare. The nature of the investigation was slow-paced, and meetings were spaced far apart, but their conclusions slowly pointed towards Blue Streak becoming expendable. In early meetings the basic belief in nuclear independence was upheld when the optimum strength was given as 'large enough to be clearly effective on its own'. However, this was mainly in order to secure further American co-operation, and to out-do the 'pure prestige demonstration planned by France'. In one meeting of December 1958 Polaris was actually said to have been preferable on a number of counts. It would not attract a massive attack on Britain; it did not require foreign bases; it would not be under dual control; and it was actually said to have been 'less vulnerable' than Blue Streak. On the other hand, 'severe operational and technical difficulties' were still believed to plague the project, and further studies were ordered.[699]

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[698] Sandys to Heathcoat-Amory: 25 November, 1959; AIR 19/813.
[699] 'Air Ministry Strategic Scientific Policy Committee: Notes of a Meeting with Representatives of the Foreign Office in the Air Control Room, 2 December, 1958'; the Zuckerman Archive, University of East Anglia, Norwich; SZ/AMSSP/1.

Five months later, the principle of independence was confirmed, but Blue Streak was now afforded only qualified support. Soviet ballistic missiles were not believed to have been accurate enough to neutralise Blue Streak in any surprise attack, and anti-missile defences were similarly unsophisticated; but this situation was only temporary. Two May 1959 meetings then discussed 'insurance weapons' that could at first complement Blue Streak, but then succeed it when the land-based ballistic missiles became unsuitable for Britain's purposes. By narrowing down the successor weapon to something more flexible than Blue Streak and unlikely to attract additional attacks on the mainland, they admitted that it would have to be either an air-to-surface missile launched from advanced manned bombers or a submarine-launched system. They naturally backed the former as it could be shielded from surprise attack in Australian bases, and because Polaris still said to be ten years away from being fully controllable, by which point the Soviet Union would have worked out how to counter them. Polaris, it was said, would prove a useful supplementary weapon for 'varying the bowling', but because it 'had no foreseeable use except as a deterrent weapon', it lost out to an advanced manned bomber in the Air Ministry's self-serving conclusions despite being said to have possessed clear advantages in 'mobility, and possibly also in invulnerability'.[700]

The End of Blue Streak

The study group published its interim report on 31 December recommending that Blue Streak should continue. The V-bombers could continue until 1965 with Blue Steel, but Blue Streak would prove effective until the Soviet Union developed anti-missile defences. It was suggested, however, that provided 'it would be acceptable for this country to be seen to be wholly dependent between 1965 and 1970 upon the United

[700] 'Air Ministry Strategic Scientific Policy Committee: Notes of a Meeting held in the Air Ministry, 7 May, 1959'; SZ/AMSSP/1; 'Air Ministry Strategic Scientific Policy Committee: Notes of a Meeting held in the Air Ministry, 25 May, 1959'; SZ/AMSSP/1; the Air Ministry concluded that Blue Streak would remain a credible deterrent until 1970, when the Soviet Union could pre-emptively destroy it, at which point one of three alternative delivery systems would become essential. One was Polaris, and another was a 'long-endurance aircraft' that could skip between overseas bases and present a moving target. This might have been possible, depending on the cost of the proposed aircraft, but their preferred third option was simply unrealistic. This called for 'about 50 aircraft, carrying one or two missiles each, airborne constantly throughout the year'. It was suggested that the aircraft themselves did not have to be particularly advanced, but the economic and financial implications of such a suggestion would have been well beyond British capabilities; 'The Nuclear Deterrent - 1970 and After: Note by the Air Ministry Strategic Scientific Policy Committee, 5 October, 1959'; DEFE 7/2300; Strategic Air Command attempted something similar during the 1960s with Operation Chrome Dome, but a number of accidents involving nuclear-armed B-52 bombers eventually saw the programme cancelled in early-1968.

States for the weapons used by the British contribution to the nuclear deterrent' then the government should look to either prolong the V-bombers' existence with Skybolt (although a new aircraft would be required to make this viable beyond 1970), or to acquire Polaris (either buying completed submarines or building them in Britain).[701] The study group planned to investigate Skybolt and Polaris, but Powell offered his 'personal view' to Watkinson:

> [D]espite the cost involved, we should continue with the development and some deployment of BLUE STREAK, unless we are prepared to accept an entirely new concept of a 'British controlled' contribution to the nuclear deterrent, substituting 'British operation' of part of an American deterrent force for the independent British contribution to a joint Anglo-American effort... I think that we should have to be very sure that it would be to our long term advantage to do so before we abandoned the effort we have made during the past 12 years to build up our independent nuclear weapon capability.[702]

Sandys took his lead from Powell, who had moved to the Board of Trade in the New Year, and wrote to the Chancellor supporting the study group's conclusions. Claiming that he had hoped to see the matter decided by the end of 1959, Sandys argued that until Blue Streak was officially cancelled 'we must not fail to do all that is necessary to ensure that the programme proceeds efficiently', asking for further spending on test facilities in Australia.[703] Two weeks later he sent another letter that said failing to do this would see it come into service late, and 'Therefore, unless the Defence White Paper contains an announcement that BLUE STREAK is to be abandoned, which I regard as inconceivable, and which I would, of course strongly resist, I must ask you to give the "all-clear"'.[704] Hill has suggested that these pleas to the Chancellor show that Sandys was kept in the dark about what the study group had concluded, but the timing of this intervention makes this unlikely.[705] Either way, the Chancellor demolished Sandys' case in his reply. He said it would be unreasonable to increase spending when the programme was still under review, and that new delays were hardly going to make-or-

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[701] 'British Controlled Contribution to the Nuclear Deterrent: Interim Report by the British Nuclear Deterrent Study Group, 31 December, 1959'; DEFE 7/2216.
[702] Powell to Watkinson: 31 December, 1959; DEFE 7/2216.
[703] Sandys to Heathcoat-Amory: 8 January, 1960; AIR 19/813.
[704] Sandys to Heathcoat-Amory: 25 January, 1960: AIR 19/813.
[705] Hill, *Vertical Empire*, p. 104.

break the programme. Furthermore, he dealt with Sandys' concerns that it would enter service later than planned by reminding him that 'it is, of course, this very possibility that, among other things, has necessitated the current review'.[706]

The Sandys-era thinking had not yet left the Ministry of Defence, and whilst Brundrett was succeeded as Chief Scientific Advisor by Zuckerman, Chilver remained, and he could still offer Watkinson pro-Blue Streak advice. Zuckerman did not support Blue Streak, but Chilver submitted their 'joint views' in late-January and offered it a degree or support. He accepted that the Chiefs of Staff were likely to turn against Blue Streak if Skybolt continued to progress, and that as long as Britain did not mind being dependent on the United States then Blue Streak could be sacrificed. However, should Britain wish to maintain an independent nuclear capability, as well 'keep[ing] in the business of developing large rockets (not merely manufacturing copies of American rockets)', then Blue Streak had to continue. The missile's vulnerability was said to be irrelevant because there were 'no foreseeable circumstances' under which the Soviet Union would launch a pre-emptive attack; combining it with another weapon was too expensive; and making other rockets would cost the same as Blue Streak.[707]

Sandys' influence was felt elsewhere too. Hogg, now the Lord Privy Seal, another neutral position, but with added responsibilities for science, reported to Watkinson that Sandys had told him that 'he greatly hoped that our White Paper would not encourage speculation [about Blue Streak]'.[708] Hogg pointed this out to Watkinson to avoid any cross-examination that could prove 'embarrassing', but it supports the argument that Sandys' approach to White Papers was highly-politicised. From springing Blue Streak commitments on the government in 1958, but refusing to elaborate on them, and then making a point of emphasising its continuation in 1959, Sandys clearly knew that the White Paper, in being a formal statement of government policy, was influential in holding it to account, and therefore liable to cause a degree of embarrassment when its pledges were not met. Watkinson took a similar approach, and informed the Cabinet in February that he had considered the possibility of not publishing a White Paper every year, lest it bind the government. He would do so in 1960, but in the form of a progress report and in 'non-controversial terms' stressing continuity. This was of 'particular

[706] Heathcoat-Amory to Sandys: 4 February, 1960; AIR 19/813.
[707] 'British Nuclear Deterrent: Minute by the Permanent Secretary, 22 January, 1959'; DEFE 7/2247.
[708] Hogg to Watkinson: 28 January, 1960; DEFE 7/2247.

importance' in avoiding any firm commitment to Blue Streak, which he proposed to gloss over by saying things were developing, but that the government was investigating alternative systems alongside it.[709]

Watkinson knew that Blue Streak's future was not certain. He had asked the Chiefs of Staff for their views in mid-January, and he began February by asking them how many Polaris/Skybolt Britain would need to meet its existing nuclear commitments, crucially asking them to assume that Blue Streak would not enter service.[710] The Chiefs of Staff said they had read the study group report and recommended Blue Streak's cancellation. They did not wish to see Britain abandon the development of ballistic missiles 'for which we may well have a requirement in the future', but the perceived vulnerability of Blue Streak and its comparatively lengthy preparation time meant that it could only be used as a 'fire-first' weapon, making it an unsuitable basis for a declared retaliatory policy. The Chiefs of Staff thought Skybolt was the ideal replacement, as it had the added benefit of extending the lives of the V-bombers 'in which a great deal of money has already been invested', but suggested that Polaris might prove more suitable beyond 1970, and asked for further studies into their relative merits. The 'militarily unacceptable' Blue Streak was definitely out, even if an American replacement could not be found, and in such an eventuality Britain would just have to 'accept a gap in our nuclear deterrent capability'.[711] The Ministry of Aviation had also been asked about the effects of cancelling Blue Streak on the aircraft industry, and they said it would be 'little short of disastrous'.[712] The Ministry of Defence read between the lines of this argument and told Watkinson that if he could not be certain about acquiring an American replacement for Blue Streak 'The Minister of Aviation could say that you are taking great risks', and advised him not to include any what-if sections in his case against Blue Streak.[713]

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[709] CAB 128/34, CC. (60) 7: 11 February, 1960; this approach had been utilised in the draft White Paper the Cabinet had considered. In this Blue Streak was 'continuing', and mobile systems were framed as supplementary weapons as it said 'it may be decided not to rely exclusively on fixed-site missiles'; 'White Paper on Defence (Draft): 8 February, 1960'; CAB 129/100, C. (60) 14.
[710] Watkinson to Mountbatten: 2 February, 1960; ADM 205/202.
[711] 'British Controlled Contribution to the Nuclear Deterrent: Memorandum for the Minister of Defence by the Chiefs of Staff, 5 February, 1960'; AIR 19/891.
[712] William Strath to Edward Playfair: 10 February, 1960; DEFE 7/2247; this was an interesting response from the Sandys-led ministry, as the Ministry of Supply had said similar things about the effects of his first White Paper. See: 'Effects of the White Paper on the Civilian Aircraft Industry: Note by the Minister of Supply, 1 July, 1957'; 1 July - CAB 129/88, C. (57) 154; 'Effects of the White Paper on the Aviation Industry: Note by the Minister of Supply, 1 July, 1957'; CAB 129/88, C. (57) 155.
[713] Playfair to Watkinson: 19 February, 1960; DEFE 7/2247.

Blue Streak's fate was due to be sealed by the Defence Committee, and Sandys mounted a last-ditch attempt to save it. He said that three questions had to be answered before any decision was made, and his reasoning for each is worth considering at length as, in this moment of desperation and uncertainty, Sandys returned to the core tenets of his personal nuclear belief system in making his case. The first question was 'Must it be invulnerable?' Watkinson had taken the Chief of Staff's position that Blue Streak was both vulnerable to a pre-emptive attack, and that it was also 'politically unacceptable' for a peace-loving democracy to depend on something that could only be used to begin nuclear hostilities.[714] 'I entirely disagree' was Sandys' verdict, and he accused the Ministry of Defence and Chiefs of Staff of failing to provide any reasons for their position. Sandys' argument was that the 'effectiveness of the British deterrent cannot be considered in isolation'. He said that to 'knock out' Blue Streak the Soviet Union would have to hit Britain with 1000 megatons of thermonuclear explosives, which would kill a third of the population on the first day before condemning 'many of the remainder' to fallout death. Not only did this make its vulnerability an irrelevance, since nobody would live to benefit from its retaliatory capabilities, but he thought there was no way the United States would let such an act go unpunished, so the Soviet Union would therefore have to simultaneously launch a similar attack on them, which they were not capable of doing. If they were, and if they were also 'prepared to provoke punishment of this magnitude', Sandys witheringly suggested that a 'handful of British POLARIS submarines could hardly be expected to affect their decision'.[715]

If this may read like a full reversion to interdependence, he did consider independent action from the Soviet perspective. If they convinced themselves that the United States would not avenge Britain, they would still have to assure themselves that Britain would abandon Western Europe. This would simply not happen, as an attack on Britain 'would inevitably follow'. This all meant that 'Russia would not dare to make a preventative attack upon Britain'.[716] As well as confirming that Sandys' valued the retention of unilateral capabilities for valid - if unlikely - strategic reasons, his belief in the inevitability of the Soviet Union turning on Britain is revealing. Previous sections explored his staunch anti-communism, believing confrontation to be inevitable and

[714] In his memoirs Watkinson wrote 'we had to get rid of the remaining vestiges of any "first fire" philosophy. No nuclear power should be able to believe that by striking first it could win all'; Watkinson, *Turning Points*, p. 121.
[715] 'Blue Streak: Note by the Minister of Aviation, 19 February, 1960'; AIR 19/813.
[716] *Ibid.*

comparing the emerging Cold War to the late-1930s. This informed his take on the 'fire-first' controversy, which also drew upon the concept of deterrent he first used during the Radical Review:

> [If Britain] were to give the impression that we would in no circumstances be the first to fire a strategic nuclear weapon to repel a conventional attack, we would completely undermine the value of our deterrent. We would, in effect, be assuring the Russians that they could use their immense conventional superiority, without risk of nuclear retaliation. That would be little short of an invitation to aggression.[717]

Here Sandys furthered his previous logic. He did not consider nuclear weapons to belong to a different category of weapon, and he believed that in any war of vital national interests they would inevitably be utilised. Therefore, if Britain refused to use its own devastating nuclear capability first, according to Sandys' concept of deterrence - that it was simply a case of proving you could destroy your opponent - this ceded the initiative to the totalitarians, who, unburdened by feelings of embarrassment over naked aggression, forced Western policy to become inherently reactive.[718] Credibility in this sense was as much bound up in the political will of politicians as it was the capabilities of any particular weapon system. Even if Polaris and Skybolt could do everything their supporters promised, their credibility was undermined by gifting the Soviet Union a free shot at destroying Britain.

His second question was 'Are other methods better?' He described Skybolt as 'immensely complex and entirely novel', predicting that its existence on the 'utmost limit' of technology would make it 'very much less reliable' than Blue Streak and Polaris. To some extent he would go on to be proven correct about this, but it does once

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[717] *Ibid.*

[718] Quincy Wright said that democracies were at a disadvantage 'in the game of power diplomacy', as 'They cannot make effective threats unless they really mean war; they can seldom convince either themselves or the potential enemy that they really do mean war; and they are always vulnerable to the dissensions of internal oppositions'; Wright, Q., *A Study of War: Second Edition, with a Commentary on War since 1942* (Chicago: University Press, 1965), p. 842; Fuller illustrated this with a classical allusion to the democratic Athenians and Philip of Macedon, the autocrat: '"So you", thundered Demosthenes, "if you hear of Philip in the Chersonese, vote an expedition there, if at Thermopylae, you vote one there; if somewhere else, you keep pace with him to and fro. You take your marching orders from him; you have never formed any plan of campaign for yourselves, never foreseen any event, until you learn that something has happened or is happening... Our business is not to speculate on what the future may bring forth, but to be certain that it will bring disaster, unless you face the facts and consent to do your duty."'; Fuller, J. F. C., *The Conduct of War, 1789-1961* (London: Eyre & Spottiswoode, 1961), p. 319.

again raise questions as to why he was placing an arbitrary limit on development. He also argued that Skybolt could not carry 'decoys' like Blue Streak, so it was also easier to defend against, and its immunity was based on an ability to keep the V-bombers constantly 'at three to four minutes notice' (alternative schemes, such as the Air Ministry's idea of keeping manned aircraft constantly airborne, were discounted as 'extremely costly'). Polaris received similar criticism, as it shared most of Skybolt's apparent weaknesses. It did not have Blue Streak's range, and both its warhead and its counter-measure capacity were insubstantial.[719] He conceded that although the two alternative systems could be said to have the greater measure of invulnerability on account of their mobility, he argued that this was 'more of a theoretical than an actual asset':

> In theory, it might be useful to be able to deploy strategic nuclear weapons in the Middle East and the Far East... But it is inconceivable that we would ever wage war against China, except in alliance with the United States, whose nuclear power in the Pacific would not be significantly increased by any contribution we could make. Moreover, in such a situation, it would hardly be safe for us to deploy our limited deterrent force so far away from home.[720]

This again reads like a shift towards interdependence, but the implication is that Britain did 'significantly increase' American nuclear power in Europe, and also that temporarily leaving Britain without a home-based deterrent - or the greater part of its offensive capabilities, as Sandys would have seen it - could attract the Soviet pre-emptive attack, which again implies that the independent British nuclear capability was a functioning deterrent in itself.

The third question was 'Will it save money?' His answer was no. Sandys claimed that over the next ten years Blue Streak would cost £515 million, which compared favourably with five years of Skybolt and nine Polaris submarines to replace it costing £50 million. This was increased over the next fifteen years, when the Polaris costs would exceed £700 million, more than £150 million above the expected cost of maintaining Blue Streak. Sandys had showed that Blue Streak was the 'cheapest method

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[719] 'Blue Streak: Note by the Minister of Aviation, 19 February, 1960'; AIR 19/813.
[720] *Ibid.*

of maintaining the deterrent after 1965', but claimed it was so important that these costs did not necessarily have to come from the defence budget, as his hopes for Blue Streak as an instrument for space research meant that it could benefit from the allocation of normal civil expenditure.[721] Because he had not been asked to consider Blue Streak in depth, Sandys had tried to save Blue Streak by reverting to his well-established beliefs regarding the nature of deterrence and the utility of nuclear weapons; but the decision was to be made in a Defence Committee meeting on 24 February, and his isolation was about to become complete.

The Air Ministry finally turned against Blue Streak as a military weapon in order to pursue their short-term desire for replacement manned bombers, but it was Macmillan's intervention that fundamentally undermined Blue Streak going into the crucial meetings.[722] In this he framed Britain's nuclear capability as guaranteeing 'standing' and 'influencing American policy', rather than as a genuine nuclear strike capability, explicitly rejecting 'aiming to provide a force capable by itself of deterring Russia'. He said Britain 'must maintain a viable force in being, under our ultimate control, which is sufficiently large to accomplish our political purposes'; but these political purposes now solely referred to influencing alliance strategy, rather than destroying particular targets of importance to Britain. Macmillan said he supported abandoning Blue Streak and relying on Blue Steel until 1966, when Skybolt would take the deterrent into 1970, before either continuing or making way for another mobile system.[723] Macmillan's account of the crucial meeting reads 'General agreement reached (Duncan Sandys alone dissenting)', and the minutes bear this out.[724] Watkinson had recommended cancelling Blue Streak, and noted an 'important consideration in favour of mobility' as being the 'difficulty facing a democratic Government in any prospective use of static "fire-first" weapons'. Sandys responded by re-iterating the main points of his memorandum. Cancellation would fail to save money 'in the long term', and mobility brought no practical advantage to Britain's nuclear capability owing to the fact that the Soviet Union would be incapable of launching simultaneous attacks on Britain and the United States. On the other hand, a 'fire-first' system could still prevent the overrunning of

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[721] *Ibid.*
[722] In a remarkably blinkered proposal, the Air Ministry wanted Blue Streak cancelled but sought 'to keep alive the technique of building long range rockets' so Britain could maintain an independent nuclear capability beyond the life-span of its immediate replacement, which they hoped would be the V-bomber successor they craved; Ward to Watkinson: 23 February, 1960; AIR 19/813.
[723] 'Deterrent Policy: Memorandum by the Prime Minister: 24 February, 1960'; CAB 131/23, D. (60) 2.
[724] 24 February, 1960; Catterall, *The Macmillan Diaries: 1957-66*, p. 274.

Western Europe if American support failed to materialise. He said any decision had to 'depend primarily upon financial considerations', but also on a 'technical judgment of the performance of the various weapons systems', which he thought ruled out Skybolt and maintaining the manned bombers it required. In spite of this, Sandys said he would not oppose abandoning Blue Streak as a weapon provided development work continued as part of a British space programme, and the Committee provisionally agreed to its cancellation.[725]

Sandys had accepted defeat, but the minutes of the meeting do little to suggest that he had lost faith in Blue Streak, as the arguments made against it were applicable to his strategic concept. The Chancellor focussed on its cost, but in general discussion it was suggested that a mobile deterrent would reduce 'the commitment for air defence of the deterrent', and have positive implications for civil defence planning.[726] Had Sandys' proposals been followed over the years, there would be no air defence burden. Nor would civil defence have remained an issue in terms of post-thermonuclear war planning, as he had long believed that Britain would not survive the decisive opening phase. If Blue Streak were ever to be attacked, government calculations suggested that this opening phase would now be utterly fatal to the entire country, making any considerations beyond what could most effectively strike the Soviet Union a complete irrelevance.

Macmillan then closed by saying there was 'no more military value in a static missile', and that mobility 'made our deterrent more credible'.[727] The V-bombers were mobile, but if they could not guarantee an ability to strike at the Soviet Union, then their credibility was non-existent, which was why Blue Streak had been commissioned in the first place, and why Sandys remained unconvinced by Skybolt's comparative 'military value'. The following day he asked Macmillan whether the Defence Committee had truly considered this, pointing out that Skybolt was only as effective as the V-bombers. Apart from the risk of them simply being shot out of the sky, if they could not disperse within a short period of warning, they were just as vulnerable as Blue Streak, and 'incomparably' more so if pre-emptively attacked because they would not benefit from being stored in reinforced concrete silos. Therefore, Skybolt was 'just as much a "fire-

[725] CAB 131/23, D. (60) 1st Meeting: 24 February, 1960.
[726] *Ibid.*
[727] *Ibid.*

first weapon'' as BLUE STREAK'.[728] This was a valid point, and one which the Air Ministry sought to dispel by using the same argument Sandys had used in favour of Blue Streak, saying 'it does not matter whether the V-bombers could or could not escape a Russian attack... I do not believe that the Russians could or would decide to attack us on the basis of such a fine but potentially suicidal calculation'.[729]

The Defence Committee officially cancelled Blue Streak on 6 April, and Sandys resigned himself to placing on record his belief that 'from the military point of view', Skybolt had 'no marked advantage' over Blue Streak.[730] Macmillan then informed the Cabinet of this decision, claiming to have been left satisfied during his recent trip to Washington that an adequate American replacement could be acquired, and it was left to Watkinson to break it to the House of Commons.[731] He did this with a short statement saying Blue Streak was outdated. It was vulnerable, and 'launching missiles of considerable range from mobile platforms' was now a possibility.[732] Brown immediately began to gloat, calling it the 'most incredible chapter of obstinacy and of determination to go on with something long after all kinds of people everywhere were clear in their minds that it was wrong'. Labour had been against Blue Streak for some years, and they sought (with some justification) to make it into an issue of 'Ministerial and official incompetence and of a determination to hide it at the end of it all'.[733] Brown wanted an official inquiry into the programme, but when Watkinson tried to explain things by referring to what Sandys had said the previous February, he was interrupted by shouts of 'Where is he?' and calls for his resignation.[734]

Two weeks later Brown forced a debate about holding an inquiry. His focus was Sandys, and whilst he said he did not wish to criticise 'the Minister of Aviation and his colleagues' for being proven wrong, he was concerned that they had 'persisted in an error of judgment, which... they persisted in long after it became apparent to almost

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[728] Sandys to Macmillan: 25 February, 1960; AVIA 66/2; 'Vulnerability of Bomber Force: Note by the Minister of Aviation: 30 March, 1960'; AVIA 66/2.
[729] Ward to Macmillan: 1 March, 1960; DEFE 7/2063; Hill has written that the various systems were never considered 'on a level pitch', and that 'the criteria that were applied to Blue Streak were not being applied to the V bombers with Skybolt'; Hill, *Vertical Empire*, p. 103.
[730] CAB 131/23, D. (60) 3rd Meeting: 6 April, 1960.
[731] CAB 128/34, CC. (60) 26: 13 April, 1960; 'Blue Streak: Memorandum by the Prime Minister, 8 April, 1960'; AIR 19/813.
[732] Hansard HC vol 621 col 1265 (13 April, 1960).
[733] Hansard HC vol 621 cols 1266-67 (13 April, 1960).
[734] Hansard HC vol 621 col 1269 (13 April, 1960).

everybody that it would turn out to be a costly and abortive failure'.[735] In response, Sandys attacked Brown, asking him whether he thought it had been a mistake to commission Blue Streak.[736] Hansard gives the impression that Brown took exception to Sandys' line of questioning, and he began attacking Sandys' record as Minister of Defence, accusing him of bearing 'personal responsibility' for the continuation of the programme, and being 'guilty of persisting with a rocket which has failed to work and which has cost us large sums of money'. He put this down to the 'fallacy' at the heart of Sandys' strategic concept, his dependence on an independent nuclear capability, and brought up previous Labour complaints about Blue Streak as a 'fire-first' weapon:

> Not only did he not understand what we were arguing about here, but he did not understand what his own Service advisers were saying to him. He did not ever get to the bottom of what was worrying the Air Force. He was blind to all the arguments. This was why the advice reaching us did not make the impact on him which it made on us. He never saw the basic point of the advice.[737]

Sandys had obviously understood the issue. He just simply disagreed with the idea of it being a problem. But apart from that, Brown was right to accuse Sandys of having ignored other concerns which were now said to undermine Blue Streak. It was not just a case of it being an undesirable 'fire-first' weapon, but of paying no attention to 'the whole of the evidence at that time [which] was in favour of mobility and of solid fuel':

> The conclusion can only be, therefore, that all the information was available, that it was all opposed to going on with Blue Streak and that the Minister nevertheless persisted with Blue Streak for eighteen months... It is, therefore, the Minister's determination to persist with the project, against the weight of the evidence, which is the basic accusation which we make against him.[738]

Watkinson defended the government, and Jones, now on the back-benches, defended both Sandys and Blue Streak. Harold Wilson, the Shadow Chancellor then joined in,

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[735] Hansard HC vol 622 cols 211-12 (27 April, 1960).
[736] Hansard HC vol 622 cols 214-15 (27 April, 1960).
[737] Hansard HC vol 622 cols 215-19 (27 April, 1960).
[738] Hansard HC vol 622 cols 220-24 (27 April, 1960).

quoting the *Financial Times* as saying 'Blue Streak survived as long as it did simply because Mr. Duncan Sandys is an extremely obstinate man'. The crux of their argument chimed with what Labour alleged: 'He based his defence policy on the deterrent, and he based the future delivery of the deterrent on Blue Streak. So long as he was Defence Minister he was a jealous patron of the project against all comers and, indeed, against all arguments'.[739] This captures the argument of this thesis nicely, and when Sandys finally spoke he did not attempt to evade personal responsibility, but nevertheless contextualised his position:

> I suppose that I have had more to do with rockets - at both ends - than any other hon. Member. In the war-time Coalition Government I was the Minister responsible for defence against the German V1 and V2 weapons, and since 1951 I have been concerned with missiles at the Ministry of Supply, the Ministry of Defence and now at the Ministry of Aviation. I therefore readily recognise that I am accountable in a special degree for the decisions that have been taken.[740]

He added 'I am convinced that the decisions that we have taken were right, in the circumstances obtaining when they were taken, all the way through', and claimed that 'Blue Streak has not been stopped because of any technical failure'. Had it been completed, he was 'confident that it would have had as fine a performance as any medium-range rocket made in Russia or America'.[741] Sandys defended Blue Streak against the background of his original White Paper, 'an essential part' of which was 'that Britain should possess nuclear weapons of her own, and the means of delivering them'. With manned bombers becoming increasingly vulnerable to air defences, the 'only kind of weapon' that could overcome them, he said, was a ballistic missile.[742] He then recalled his 1954 and 1958 visits to the United States, claiming 'I have, in fact, from the very start been consistently trying to substitute an American weapon for Blue Streak so as to save money'.[743] Clark has noted this claim, suggesting that Sandys might have been guilty of 'retrospective rationalization to portray an image of consistency in Government policy in the light of the decision to scrap Blue Streak and purchase

[739] Hansard HC vol 622 col 323 (27 April, 1960).
[740] Hansard HC vol 622 cols 330-31 (27 April, 1960).
[741] Hansard HC vol 622 col 331 (27 April, 1960).
[742] Hansard HC vol 622 col 331-33 (27 April, 1960).
[743] Hansard HC vol 622 cols 335-36 (27 April, 1960).

Skybolt in its stead', but also writing that there was no viable substitute for Blue Streak on offer during this period.[744] In viewing Blue Streak in terms of government policy, rather than Sandys' personal approach, Clark concludes that 'if the advice of the Chiefs was compelling in 1960, it should have been equally compelling much sooner', making the government 'guilty of political cowardice in the short term'.[745] The Chiefs of Staff's reasoning was not compelling to Sandys, for reasons made clear over the course of this thesis. Nor would it ever have been, so he cannot be accused of trying to reconcile his actions to their arguments. He would happily have substituted an American weapon for Blue Streak; it was just that none of them were considered to be worthwhile substitutions owing to both political and technical shortcomings, which is why he insisted that he 'had no alternative but to continue with the development of Blue Streak'.[746]

Conclusion

In his memoirs Macmillan said 'I am not now convinced that it was wise' to cancel Blue Streak.[747] He believed that it would have worked perfectly had it received adequate backing, but his perspective was no doubt coloured by the crisis Britain was thrown into by the cancellation of Skybolt. This has briefly been covered in the previous section, and a lengthy history of the acquisition of Polaris is not merited, particularly as Sandys' influence on the defence policy-making process was all-but ended in July 1960 with his move to the Commonwealth Relations brief. However, it is worth mentioning that when Macmillan convinced the United States to let Britain in on the project, he went to great lengths to stress its operational independence. He insisted that any declaration of joint policy allowed for an exception 'where Her Majesty's Government may decide that the supreme national interests are at stake', and when he returned to Britain having secured this he appeared convinced of the need for an independent nuclear capability.[748] Having detected a degree of scepticism in Kennedy's advisors, which he attributed to the fact that his government 'included hardly any of the men who had been associated with this country in the Second World War', he defiantly reminded the Cabinet that Britain's

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[744] Clark, *Nuclear Diplomacy*, p. 159 and pp. 184-89.
[745] *Ibid.*, pp. 188-89; Pierre made a similar allegation, suggesting that Sandys stuck with Blue Streak 'in the hope of being able to rebut the opposition's criticisms'; Pierre, *Nuclear Politics: The British Experience...*, p. 310.
[746] Hansard HC vol 622 cols 333-35 (27 April, 1960).
[747] Macmillan, *Pointing the Way*, p. 251.
[748] CAB 128/36, CC. (62) 76: 21 December, 1962.

atomic weapons programme pre-dated the United States', and provided four reasons why Britain had to maintain its nuclear independence:

1) The Western Alliance would 'cease to be a free association' if nobody else had nuclear weapons.
2) The United States could theoretically abandon Britain in the face of Soviet aggression.
3) The Soviet nuclear threat, with no British counter threat, rendered conventional forces worthless.
4) Giving up nuclear weapons entirely would remove Britain from disarmament talks.

He had therefore requested Polaris on account of its 'high degree of indestructibility', its second-strike capabilities, and its mobility. And he had got it, in spite of American policy-makers' worries that it 'would extent [*sic*] (extend) the effectiveness and credibility of the United Kingdom deterrent for an almost indefinite period in the future', which he said they opposed as it could potentially undermine their nascent plans for pooling Western nuclear resources under their supervision.[749]

If this had become Macmillan's position on nuclear capabilities in later life, it represents a remarkable reversal of his proposals that had killed Blue Streak, as well as a move towards what Sandys had consistently advocated. In February 1960 he had rejected maintaining an ability to devastate the Soviet Union in favour of having just enough nuclear power to command American attention. Perhaps the reluctance he had encountered in the Kennedy administration had convinced him that the Anglo-American partnership was not as strong as it had been under Eisenhower, who had a firm association with Britain and the Second World War (and Macmillan personally), but his move back towards an insurance policy of unilateral capabilities was important.[750] He had told the Cabinet that Polaris' second-strike capability made it suitable, but in coming to regret the cancellation of Blue Streak, despite its sole use as a 'fire-first' weapon, it would imply that he had retrospectively come to see Sandys' interpretation of deterrence as having been correct. It was mentioned in the third section how during his own period as Minister of Defence Macmillan had accepted that 'if the Russians

[749] CAB 128/37, CC. (63) 2: 3 January, 1963.
[750] 'He would trust this President [to defend Britain], but what about his successors?'; Horne, *Macmillan: Volume II*, p. 440.

attacked (which is *very* unlikely) with conventional weapons only, in the first instance, we should be forced into the position of *starting* the nuclear war', so why did he fail to support Sandys' position at the time?

Clark has summed up Sandys' involvement with Blue Streak by describing him as a 'vocal champion, apart from some wavering in late 1958 but a champion who, having to contend with a wider empire, could not afford the parochial dedication to the missile which was demonstrated by the Air Staff'.[751] His 'wavering' over Thor aside, which has been shown to have not been a direct threat to Blue Streak, Sandys' approach to Blue Streak was utterly parochial. Unlike the Air Ministry, he never turned against it in favour of new aircraft, and the lengths he went to in supporting it have been made clear. Perhaps Clark's characterisation would better suit Macmillan. His strategic concept was originally strikingly similar to what Sandys advocated, but his 'wider empire', whether having to balance departmental budgets, stave off Labour Party attacks, or increase British influence in United States policy-making, prevented him from letting his Minister of Defence have it all his own way. We have seen how Sandys was forced to make similar compromises in major aspects of his defence review, but we have also seen how he refused to do so with Blue Streak. Blue Streak was, as his critics alleged, what his entire strategic concept depended upon. Where he could allow debates over air defence and aircraft carriers to go against him, he could not sacrifice Blue Streak, and if this meant convincing himself that solid fuels were inherently weak, that over-spending was 'inevitable', or that the Soviet Union would sink submarines under the polar ice caps, then he did so because of his parochial dedication to this particular weapon system.

[751] Clark, *Nuclear Diplomacy*, p. 164; on the other hand, Baylis writes: 'Despite his own periodic doubts, he retained faith in Blue Streak and urged the government to continue with the project right up to its cancellation in February 1960'; Baylis, *Ambiguity and Deterrence*, p. 279.

Conclusions

This thesis has argued that there is clear evidence that Sandys' policy preferences as a minister, and his actions in office, were the practical realisation of his personal nuclear belief system, which was itself formed out of his interpretation of his role in the fight against unmanned German weaponry during the Second World War. This belief system proved highly-influential in helping Sandys to navigate the uncertain and ambiguous strategic landscape in which the defence policy-making process of the 1950s and early-1960s took place. By beginning with Sandys' belief system and taking it seriously as a core element determining Sandys' actions, this thesis has challenged previous scholarly interpretations of his actions that place an emphasis on external pressures - departmental thinking, political expediency, but most of all the prioritising of reductions in expenditure over any coherent strategic concept. In doing so, it suggests they miss a critical element needed to form a clear understanding of British defence policy throughout Sandys' period of involvement, and the central tenets of the 1957 White Paper in particular.

In assessing Sandys' individual belief system, and how its foundations can be found in his experiences of the Second World War, this thesis has posited that two beliefs stand out as particularly influential in determining his strategic concept. The first is an appreciation of the role weapons that were perceived in 1945 as 'unconventional' had to play in future warfare. This appreciation informed his concept of deterrence, and therefore his strategic concept overall. The second was a particular belief that ballistic missiles descended from the V-2s would inevitably form the basis of any worthwhile strategic strike capability. This led to him choosing to make such weapons central to the success of the 1957 White Paper, and therefore offers a convincing explanation as to why he fought so hard to ensure the success of the Blue Streak programme in the face of strong opposition from the Armed Forces, Cabinet colleagues, and opposing politicians.

Sandys' personal perception of the nature of the threat of unmanned weapons, was conceived even before the V-weapons were unleashed against Britain. His ideas led him to take these novel contraptions seriously even before their threat had materialised. Having been charged with finding practical solutions to unknown quantities, he began to consider the secret German projects as merely another problem to be solved, rather than as some new weapon of a different order. That he had to combat these new

developments with tried-and-tested means (anti-aircraft guns, fighter aircraft, and precision bombing raids) meant he was simply unable to treat the V-weapons as anything out of the ordinary, as might have been expected of somebody who first witnessed them literally falling out of the sky. This business-like approach to new technology became the foundation of his attitude towards nuclear weapons prior to his return to government. Where Sandys simply sought to balance the use of nuclear weapons against their potential to save lives (and time) in halting the spread of communism in Korea, others were horrified at his apparent willingness to move beyond acceptable parameters of 'normal' force utilisation. Sandys' view was based upon his approach to new technology as merely another step in a logical progression of technological development. Throughout his period of office he failed to see what practical differences there were between ballistic missiles and nuclear weapons when discussing the supposed rules of warfare.

Nuclear weapons were held to lie outside of normal strategic planning because they were only useful for devastating everything within any given area.[752] But the V-2 had been designed specifically to attack enemy populations, and the need for a 'strategic bombardment' weapon had also been cited as the reason for commissioning Blue Streak. This was the fundamental difference between those weapons descended from the V-2 and the manned bomber, which, whilst being more vulnerable to defensive counter-measures, could still boast a greater level of versatility, as the Air Ministry sought to emphasise when Blue Streak was about to be cancelled. Sandys had rapidly accommodated himself to the idea of the ballistic missile coming to dominate strategic planning on the basis that they could not be defended against. In his view from the attacking perspective they promised an ability to devastate the enemy population without having to resort to the kind of extensive economic mobilisation needed to sustain the manned bomber forces used throughout the Second World War. This was why he reported in November 1944 that 'In future the possession of superiority in long distance rocket artillery may well count for nearly as much as superiority in naval or air power'.[753] The logic of this position, which was later reflected in his repeated references

[752] Lawrence Freedman provides a summary of American policy-makers 'anxieties' about this weapon which it was said 'carries much further than the atomic bomb itself the policy of exterminating civilian populations', and which was described as being inherently genocidal, 'beyond any military objectives', and having more in common with 'very great natural catastrophes' than known armaments; Freedman, L., *The Evolution of Nuclear Strategy (Third Edition)* (Basingstoke: Macmillan, 2003), pp. 60-64.
[753] *Ibid.*; War Cabinet "CROSSBOW" Committee: Seventeenth Report by the Chairman, 23 November, 1944; DSND 2/3/6.

to any war of vital national interests inevitably becoming one in which nuclear weapons were called upon, was that nuclear weapons were sensible alternatives owing to their ability to force decisions at a reduced cost to the attacker.

This position was carried over into the Ministry of Supply, when he challenged the strategic priorities laid down by the Chiefs of Staff as part of his Radical Review policy documents. Rather than seeing deterrence as an individual layer of defence policy, which was different to, and only lead in to, the actual war, Sandys believed that the Soviet Union could only be deterred by Britain actually preparing to fight the Third World War with nuclear weaponry. In other words Sandys' beliefs led him to argue that the British government needed to make serious plans to obliterate Soviet national life before the communists could do the same to Britain. This naturally fed into his belief that the possession of newly-developed thermonuclear weapons, the most effective weapons for such a task, was a pre-requisite for any nation with serious global ambitions. The result of this was that he found himself advising the government to depend on these weapons a full year before Churchill and other leading policy-makers began to take the idea of developing them seriously. Furthermore, this was a decision he seems to have reached without agonising over the moral implications of this 'super bomb', as American policy-makers had, and which even Churchill made reference to when he announced, with an air of reluctance, to the House of Commons in March 1955 that Britain was to manufacture its own so as not to be left behind.[754]

The British thermonuclear weapons programme was well underway by the time Sandys entered the Ministry of Defence in January 1957, but it was his dependence on his established policy preferences that saw the idea of preparing to fight the Third World War become the intellectual basis for the entirety of Britain's new defence posture. This provides the connection to the second major aspect of his belief system. The idea that ballistic missiles could not be defended against, first presented to the War Cabinet in November 1944. This became the other dominant aspect of Sandys' strategic concept. When he informed the government of there being no 'effective counter-measures' to the V-2, which could out-perform all existing fighter aircraft and fixed air defence weapons, Sandys immediately recognised the potential value of unmanned

[754] Churchill referred to the 'grave decision' to proceed with the development of a British version of something which had seen 'mankind placed in a situation both measureless and laden with doom'; Hansard HC vol 537 cols 1894-95 (1 March, 1955).

weaponry in future warfare. By pressing the British government not to allow itself to fall behind in the development of weapons which he believed would go on to 'count for nearly as much as superiority in naval or air power', Sandys was putting the descendants of the V-2 at the heart of his defence thinking a full decade before Britain got around to commissioning its own unmanned strategic bombardment weapons.[755]

Sandys returned to his November 1944 reports as Minister of Supply when charged with finding a solution to the strategic dilemmas of the Cold War whilst operating on a seemingly ever-decreasing budget. In what proved to be alarming proposals to some, that were described as 'revolutionary' when being politely declined by the Ministry of Defence, Sandys followed the logic of his wartime reports. His June and November memoranda advocated a long-term shift in British defence policy, that would lead to it becoming dependent upon the only delivery system capable of striking at the Soviet Union - ballistic missiles descended from the V-2s that had previously confounded his own defensive efforts. This had the reciprocal effect of convincing Sandys that if the Soviet Union were to begin the Third World War, Britain could not hope to survive the 'decisive opening phase'. Thus the Soviets had to be discouraged from doing so by Britain building up of a supply of 'long-range guided rockets for use in offensive bombing roles'. It was the 'devastating possibilities' of these, when capped with thermonuclear warheads, that Sandys believed were the only convincing threat to expansionist Soviet policy-makers.[756] In his second 1953 memorandum, Sandys went further than his previous arguments, stating that 'we have no means of defence whatsoever against long-range rocket attack'. In other words, he accepted that Britain could no longer protect its people if global war broke out. The only solution was for Britain to manufacture 'long-range weapons of our own, either ballistic rockets of the V.2. type or flying guided missiles', as manned bomber aircraft could not maintain the necessary amount of striking power to make the Soviet Union think twice about attacking Britain.[757]

Britain's own attempt at constructing a 'ballistic rockets of the V.2. type', Blue Streak, was commissioned in mid-1955, and when Sandys became Minister of Defence, he immediately attempted to realise his previous policy ideas by building British defence

[755] War Cabinet "CROSSBOW" Committee: Seventeenth Report by the Chairman, 23 November, 1944; DSND 2/3/6.
[756] 'Review of Defence Expenditure: 15 June, 1953'; DNSD 4/1/1.
[757] 'Defence Policy and Expenditure: 20 November, 1953'; DSND 4/1/1.

policy around what he perceived to be Blue Streak's irresistible offensive qualities. *Defence: Outline of Future Policy* was not the revolutionary document it held itself to be in terms of doctrine; but, as well as taking the credit for pulling existing trends together for the first time, we have seen the extent to which Sandys' policy preferences played a decisive role in its eventual form. Powell, the co-author of the White Paper, gave him sole credit for placing an emphasis on the role of ballistic missiles rather than manned bomber aircraft, and his attempts to maintain the thrust of his favoured prescriptions in the face of opposition from the Air Ministry, the Admiralty, and those involved at Cabinet-level, can simply not be disregarded in any interpretation of the thought processes behind Sandys' involvement in this fundamental re-organisation of Britain's strategic concept.[758] Nor can Sandys' personal involvement be underestimated in relation to Blue Streak. It was this personal commitment that meant the missile remained at the heart of British defence policy, as Groom put it, 'at least twelve to eighteen months after the missile had been found wanting'.[759]

In the first major declaration of his policy preferences as Minister of Defence, Sandys told the House of Commons in February 1957 that it was 'inconceivable' that Britain could be completely protected from an attack from the air. In consequence, he argued, this basic fact had to inform all attempts to devise sensible defence policies for Britain. It was also ‘'quite clear' to Sandys that this aerial bombardment, should it ever materialise, would come from unmanned weapons rather than manned aircraft, and that devising any solution to this threat in the short-to-medium term was 'absurd'. He alluded to his Second World War service in this debate, and informed the House of his belief that the future effectiveness of Britain's nuclear capabilities, and therefore the credibility of its deterrent, would 'depend upon the possession by us of these weapons'.[760]

From here he set about making Blue Streak indispensable. In his February submissions to the Cabinet and the Defence Committee he laid out his plans to replace manned bomber aircraft with ballistic missiles, and when preparing his drafts he did not appear to have paid much attention to Macmillan's suggestion that an indigenous missile programme was not all that essential.[761] The first draft Sandys and Powell produced

[758] 'Defence Turning Point', p. 30.
[759] Groom, *British Thinking About Nuclear Weapons*, p. 310.
[760] Hansard HC vol 564 cols 1303-12 (13 February, 1957).
[761] 'Review of Defence Plans: Note by the Minister of Defence, 22 February, 1957'; AIR 2/14712; CAB 131/18, D. (57) 2nd Meeting: 27 February, 1957.

claimed that ballistic missiles made it 'necessary for all previous defence planning to be revised', and flatly declared that 'defence has become impossible', much to the annoyance of the Air Ministry and the Home Office.[762] It may have been the case that subsequent offerings revised the wording of these passages, but as has been demonstrated, Sandys did his utmost to maintain the spirit of his original policy statements. There was no promise of a British-built ballistic missile in the published White Paper, but it was still the case that the government 'frankly recognised that there is at present no means of providing adequate protection for the people of this country against the consequences of an attack with nuclear weapons'.[763] He made up for these concessions in the House of Commons, however, when he undermined his previously compromising language about unmanned weapons merely supplementing manned bombers by claiming 'We are unquestionably moving towards a time when fighter aircraft will be increasingly replaced by guided missiles and V-bombers by ballistic rockets'.[764]

Having re-orientated British defence policy around his strategic concept and preference for ballistic missiles, Sandys had to carry the policies through to completion. In order to deter the Soviet Union by making actual preparations for the Third World War, he had to ensure that Britain maintained a viable nuclear strike capability. He also wanted to ensure that this would be under the complete control of the British government. Although he explored Thor as a temporary stand-in, it has been shown that he was consistently unwilling to allow Thor to be used as a reason to discontinue the drive towards acquiring truly independent nuclear capabilities. The importance of Britain having full control of its nuclear delivery system was also bound up with Sandys' ideas of what a worthwhile nuclear delivery system looked like. It was no use depending on the V-bombers, even if the United States had no say in their deployment, as he believed they were incapable of doing any significant damage to the Soviet Union. Once the two mainstays of his belief system - the need to be able to devastate the Soviet Union, and the idea that only ballistic missiles were capable of fulfilling this task - came together, Sandys' time as Minister of Defence (and at the Ministry of Aviation) can only be properly understood by giving full consideration to the influence of his belief system, and thus the effect of his Second World War experiences, in determining his actions.

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[762] 'Defence White Paper: Draft B, 13 March, 1957'; ADM 205/114.
[763] Sandys' personal copy of *Defence: Outline of Future Policy*; DSND 6/52.
[764] Hansard HC vol 568 col 1763-64 (16 April, 1957).

The 'negative' aspects of allowing these policy preferences to influence decision-making, the 'cage' referred to in the introductory section, can be seen in Sandys' machinations that sought to de-rail the Admiralty's campaign in favour of Polaris whilst simultaneously making sure that Blue Streak was shielded from potentially hostile criticism and scrutiny. In making the most out of what ambiguity existed over questions relating to propellants, range, cost, and vulnerability, Sandys was successful enough in presenting Blue Streak as the only conceivable means of Britain maintaining its independent nuclear capabilities that it managed to survive various periods of crisis. That Sandys had a slightly different concept of the value of these independent capabilities, choosing instead to stress the utility of Blue Streak as a strategic bombardment weapon, rather than as a bargaining chip in influencing United States and NATO policy, also informed his decision-making. The fact is that had Sandys followed most of the arguments he made in favour of ballistic missiles, he ought to have been convinced by Polaris; if not straight away, then certainly by the time Blue Streak was becoming untenable.

The Admiralty had a strong case for Polaris being practically invulnerable, and the fact Sandys could only respond with the improbable notion of the Soviet Union sinking the submarines under the polar ice caps suggests he did have a degree of sympathy with their arguments. But, however unlikely it was that the Soviet Union could neutralise Polaris at sea, it could never be ruled out completely. This was because Polaris had a fundamental weakness in Sandys' mind - the submarine. That is, the manned component. Land-based ballistic missiles such as Blue Streak were manned at their base, but these bases were to be sited deep underground, secured beneath 750 tons of reinforced concrete. If the Soviet Union wished to counter the manned aspect of Blue Streak, they would have to have destroyed Britain in doing so. This made any concerns about vulnerability in relation to Blue Streak irrelevant to Sandys. In the event of the British bluff being called he believed that most people would be dead and Britain would no longer exist as a functioning nation state capable of waging war. This quite literally made Blue Streak an all-or-nothing weapon system, and therefore quite in fitting with Sandys' belief that there was no chance of Britain surviving any exchange of nuclear weapons. It is therefore, easy to see why he was unmoved by the government's concerns about its supposed limitations as a 'fire-first' weapon. Even if it could only be fired first, it would do what it was built to do, whereas provided there was even the remote chance

of Polaris being countered in the open water (or of Thor being destroyed on its airfields), these alternatives were no better than the manned bombers Blue Streak was meant to replace. His belief system forced him to conclude that this risk, no matter how small, meant such systems could not guarantee the effective delivery of British nuclear weapons. In consequence, they were unsuitable as the focal point of Sandys' strategic concept.

In perceiving Blue Streak as invulnerable (for all intents and purposes), it logically became the only worthwhile delivery capability for Britain in accordance with the policy preferences that had emerged from Sandys' belief system, which had itself been established during his days in the South East of England struggling to defend Britain from Blue Streak's predecessors, the V-1s and V-2s that Hitler had unleashed in a desperate attempt to force Britain out of the war. In taking all of this into account, Sandys' involvement in the defence policy-making process across three government departments represents a workable case study in demonstrating that the role of individual policy-makers merits greater consideration in any discussion of policy-making that uses the idea of strategic cultures and the nuclear belief system as its intellectual basis. By focusing on Duncan Sandys and his personal beliefs, albeit whilst taking external pressures into account, we are able to expand our understanding of British nuclear policy through increased consideration of individual agency.

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