The British Decision to Upgrade Polaris, 1970–4

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Abstract

This article adopts a political approach to examine the reasons why Edward Heath's government wanted to upgrade Polaris and the reasons why they did so by way of a programme called Super Antelope, to improve the front-ends of the missiles against Soviet Anti-Ballistic Missile defence, as opposed to the alternatives on offer. It argues that the political contexts within which Heath took the decision have been insufficiently understood, and shows that the acceptance of the 'Moscow criterion' – the understanding that Britain had to have the capability to destroy Moscow – by central government represented continuity in Britain's cold war stance.

By the late 1960s, the British government were concerned about the future of Polaris, Britain's independent nuclear deterrent. The Prime Minister, Harold Macmillan, agreed with President Kennedy in 1962 that Britain would buy the submarine-launched ballistic missile, Polaris, from the Americans.[1] From 1967 anticipated developments in Soviet Anti-Ballistic Missile (ABM) defence led the British to question whether Polaris would be able to reach its targets in the Soviet Union.[2] To deal with ABM defence, the Americans began to develop what became known as the Poseidon missile, which would have a Multiple Independently Targeted Re-entry Vehicle (MIRV) capability, and also investigated a programme, called Antelope, of improving the front-ends of the existing missiles.[3] ABM defence posed particular problems for the small British force. In October 1973, the Conservative government

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[1] There is a wealth of literature on this, John Baylis: *Ambiguity and Deterrence: British Nuclear Strategy, 1945–64* (Oxford: Clarendon Press, 1995), 319–58; Ian Clark, *Nuclear Diplomacy and the Special Relationship: Britain's Deterrent and America, 1957–62* (Oxford: Clarendon Press, 2004), 374–421.

[2] Jeremy Stocker, *Britain and Ballistic Missile Defence, 1945–2002* (London: Frank Cass, 2004), 125–45; Kristan Stoddart, 'The Wilson Government and British Responses to Soviet ABM Defence', *Contemporary British History*, 23, 1 (2009), 2–3.

[3] Andrew Priest, 'In American Hands: Britain, the United States and the Polaris Nuclear Project, 1962–68', *Contemporary British History*, 19, 3, (2005), 366–7.

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under Edward Heath resolved to improve Polaris not by buying Poseidon, either MIRVed or with its MIRV capability removed, from the Americans, but by concentrating on a programme code-named Super Antelope. Super Antelope had taken concepts from Antelope and tailored them to British requirements. The programme involved hardening the re-entry bodies and adding decoys, and from 1974 it was known as Chevaline.[4]

The aim of this article is to examine two broadly political questions: why Heath wanted to upgrade Polaris at all, and why he eventually chose to do so by way of Super Antelope. On the first question, Heath and his predecessor Harold Wilson, Prime Minister 1964–70, could both have decided not to upgrade. Had they chosen not to upgrade, Britain would still have nuclear deterrent, but with a role primarily as part of NATO. The critical issue determining the need to upgrade was the understanding that Britain should have a nuclear deterrent which was seen to be independent. Strategists believed that the credibility of a deterrent with an independent capability rested on its ability to destroy Moscow. As Baylis and others have argued, the 'Moscow criterion' was core to British nuclear thinking in this period.[5] There are still limitations to considering this question, as the Joint Intelligence Committee (JIC) conducted the analyses of the effectiveness of Britain's nuclear deterrent, and not all their material is open. Nevertheless, it is central to understanding what Beatrice Heuser has called the 'nuclear mentalities' of Cold War Britain.[6]

Secondly, the article considers why Heath opted to proceed by way of Super Antelope. Of itself, it was a significant decision. Chevaline became extremely controversial. It cost more than was initially projected, it was late arriving in service and it was kept secret. The Conservative defence secretary, Francis Pym, revealed its existence to the House of Commons in 1980, partly in order to justify buying Trident.[7]

The decision of October 1973 was also particularly revealing of the ways in which broader political concerns interacted with nuclear decision-making. Some of these issues had roots in the earlier period. The Soviet attainment of nuclear parity and the climate of superpower détente worried the Europeans as, potentially, parity reduced

[4] For more detail on the precise programme, John Baylis and Kristan Stoddart, 'Britain and the Chevaline Project: The Hidden Nuclear Programme, 1967–82', *Journal of Strategic Studies*, 26, 4 (2003), 124–54; Frank Panton, 'Polaris Improvements and the Chevaline System, 1967–75/6', *Prospero*, Proceedings from the British Rocket Oral History Conference at Charterhouse, 1 (2004), 110–3. Matthew Jones's official history of Chevaline will be forthcoming.

[5] There is also a lot of work on the Moscow criterion, but in particular, see John Baylis, 'British Nuclear Doctrine: "The Moscow Criterion" and the Polaris Improvement Programme', *Contemporary British History*, 19, 1 (2005), 53–65; Catherine Haddon, 'British Intelligence, Soviet Missile Defence and the British Nuclear Deterrent, 1964–70', in Matthew Grant, ed., *The British Way in Cold Warfare* (London: Continuum, 2009), 159–75; Kristan Stoddart, 'Maintaining the Moscow Criterion: British Strategic Nuclear Targeting, 1974–9', *Journal of Strategic Studies*, 31, 6 (2008), 897–924; Richard Moore, 'A JIGSAW Puzzle for Operational Researchers: British Global War Studies, 1954–62', *Journal of Strategic Studies*, 20, 3 (1997), 75–91.

[6] Beatrice Heuser, *Nuclear Mentalities? Strategies and Beliefs in Britain, France and the FRG* (London: Macmillan, 1998), 3–74.

[7] Stoddart, 'Nuclear Targeting', 897.

the credibility of America's guarantee to Europe. In 1967, the Wilson government accelerated the withdrawal of British forces in the Far East and applied for membership of the European Community (EC), a decision that pretty much made British accession inevitable.[8] Following the perceived tie-up between the purchase of Polaris at Nassau and de Gaulle's first veto of British accession, Wilson and Heath were keen to avoid any impression that Britain was too tied to the United States, and this had a great bearing on Britain's attitude towards the possibilities of acquiring Poseidon.[9]

Heath also had his own specific considerations. Nuclear debates concerning the Wilson governments tend to focus on party politics, but nuclear debates about Heath's period in office examine his support for Anglo-French nuclear co-operation.[10] After America's National Security Advisor and subsequent Secretary of State, Henry Kissinger, launched the 'Year of Europe' in April 1973, Heath endured the worst Anglo-American and American–European atmosphere since the Suez crisis.[11] Britain's economic and industrial problems were already mounting, and the epoch-defining oil crisis following the Middle East war of October 1973 only made things worse.[12]

The article's concentration on the political frameworks within which nuclear decisions were taken means that there are inevitable limits to what it seeks to achieve. The Polaris upgrade was enormously complicated. Policy happened at different levels, and this article does not go into detail about the technological options and varying working assumptions. There are already several works that do explain these in more depth.[13] Moreover, in the space available, this article does not try to illuminate all the many twists and turns of policy. Rather, the article assumes the importance of ministerial decision-making in the evolution of policy and examines five key points: October–April 1971 as Heath sought to pursue Anglo-French nuclear

[8] Daniel Furby, 'The Revival and Success of Britain's Second Application for Membership of the European Community 1968–71', PhD thesis, University of London, 2010; Helen Parr, *Britain's Policy towards the European Community: Harold Wilson and Britain's World Role* (London: Routledge, 2006); Melissa Pine, *Harold Wilson and Europe: Pursuing Britain's Membership of the European Communities* (London: IB Tauris, 2008); N. Piers Ludlow, *Negotiating the Gaullist Challenge: The European Community and the Crises of the 1960s* (London: Routledge, 2006), 174–83.

[9] On de Gaulle's first veto and Polaris, Constantine Pagedas, *Anglo-American Strategic Relations and the French Problem, 1960–3* (London: Frank Cass, 2000).

[10] David J. Gill, 'The Ambiguities of Opposition: Economic Decline, International Co-operation and Political Rivalry in the Nuclear Policies of the Labour Party, 1963–4', *Contemporary British History*, 25, 2 (2011), 251–76; on Heath and Anglo-French nuclear co-operation, Helen Parr, '"The Nuclear Myth": Edward Heath, Europe and the international politics of Anglo-French nuclear co-operation 1970–3', *International History Review*, forthcoming September 2013.

[11] Catherine Hynes, *The Year that Never Was: Heath, the Nixon Administration and the Year of Europe* (Dublin: UCD Press, 2009); Thomas Robb, 'Henry Kissinger, Great Britain and the Year of Europe: The Tangled Skein', *Contemporary British History*, 24, 3 (2010), 297–318; Keith Hamilton, 'Britain, France and America's Year of Europe, 1973', *Diplomacy and Statecraft*, 17, 4 (2006), 871–95.

[12] Charles S. Maier, '"Malaise": The Crisis of Capitalism in the 1970s', in Niall Ferguson, Charles S. Maier, Erez Manela, Daniel J. Sargent, eds, *The Shock of the Global: The 1970s in Perspective* (Cambridge, MA: Harvard University Press, 2010), 25–48.

[13] See notes 2 and 4, also John R. Walker, *British Nuclear Weapons and the Test Ban, 1954–73: Britain, the United States, Weapons Policies and Nuclear Testing: Tensions and Contradictions* (London: Ashgate, 2010), 318–46.

co-operation; March–October 1972 as the Chiefs of Staff (COS) considered the rationales underlying British nuclear policy; November 1972 as the government opted to investigate whether they could purchase a de-MIRVed Poseidon and marry it to Super Antelope technology via a method known as Hybrid/STAG; February–July 1973 as the government began to consider whether they could in fact buy Poseidon, either fully MIRVed or in a form known as Option M; and August–October 1973 when the final decisions were made.

Anglo-French nuclear co-operation, November 1970–April 1971

Heath's initial nuclear decision in October 1970 was to agree a project definition study to investigate Polaris improvement, but his passion was for Anglo-French nuclear co-operation. In November, he established a Cabinet Committee to investigate 'what the French could hope to gain and what we would be able to give, if the Americans were inclined to be helpful'.[14] Heath's first reason for pursuing an option with France was that he sought to strengthen a Western European grouping in the face of the erosion of credibility in America's security guarantee. Parity led some Western Europeans to doubt that America would save Europe if it meant the destruction of her homeland. Secondly, and connected, superpower détente meant that America could disengage from Western Europe, or that Britain might not be able to afford, or be offered, the next generation of nuclear weapons. Thirdly, Heath's favouring of Anglo-French co-operation was part and parcel of his renowned support for British accession to the EC. However, what has been less well appreciated is that it also reflected his rather curious overestimation of Britain's room for manoeuvre in the EC.[15] His conception, as Niklas Rossbach has shown, was not that Britain would turn to Europe to the detriment of the Anglo-American relationship. Obviously Europe was going to matter more to Britain in the changed reality of Britain's overseas posture. What Heath sought was more akin to President John F. Kennedy's idea of the 'twin pillars', with the European pillar of slightly less weight than the Atlantic one, but propping the Atlantic whole.[16] As Heath said to Nixon in December, the offer of nuclear co-operation could be one way to entice France towards a more accommodating stance in NATO.[17]

By April 1971, the Anglo-French option had quietly slid from Whitehall's main agenda, although Heath continued to broach it in high-level discussions with Nixon and Pompidou until the summer of 1973. Britain's ambassador in Washington, Lord Cromer, interjected that Britain should not approach the Americans about it until they were much more certain of the short- and long-term development of Britain's nuclear policy. In internal studies, the Foreign and Commonwealth Office (FCO)

[14] GEN(70)(29)1st, 18 Nov. 1970, UK National Archives [TNA, all forthcoming references are TNA], CAB130/490.
[15] Parr, 'The Nuclear Myth'.
[16] Niklas Rossbach, *Heath, Nixon and the Rebirth of the Special Relationship: Britain, the US and the EC, 1969–74* (Basingstoke: Palgrave, 2009), 84–121.
[17] Heath to Nixon, 18 Dec. 1970, PREM15/161.

and the Ministry of Defence (MOD) disagreed as to the emphasis they placed on the importance of retaining American assistance. Whereas the FCO were keen to see the development of a political grouping in the EC, perhaps with its own defence, the MOD were anxious not to move away from America and did not think that Europe's political identity would develop so quickly.[18] American support, the MOD advised, was far too important to the upkeep of Polaris to jeopardise by too hasty an approach to the French. Moreover, the MOD, who, politically, wanted to sustain and to further Britain's ties with the US, argued that the 1958 Agreement on the Mutual Use of Atomic Energy for Defence Purposes and the 1962 Polaris Sales Agreement meant that Britain had no information, particularly about warhead development, that they were at liberty to pass to the French without first obtaining American agreement.[19] On another level, the FCO also advised that they did not want to entangle Britain's EC bid, which now looked promising, with a nuclear offer. If Britain looked to be brokering a deal with the French, particularly with American agreement, over the heads of the rest of the EC, this could jeopardise accession.[20] Cromer also revealed that the Americans were now planning their own offer of limited nuclear co-operation to France.[21] Added to the fact that it was not at all obvious that the French wanted to collaborate with Britain, the spur to any initiative was blunted by April 1971.

Hence, Heath's initial attitude towards nuclear questions was guided by his political concerns. Britain needed to join the EC and Heath did not want France to be able to argue that Britain was too tied to America. Heath also sought to use nuclear co-operation with France as a means, less to secure entry to the EC, but to prod the EC towards creating a political organisation, and to encourage France back into NATO.

The reasons for upgrade: The Moscow criterion, 1972

Heath's interest in Anglo-French nuclear collaboration was at least in part responsible for a series of studies under the COS. As the COS observed, the long- and short-term prognoses were connected and therefore it was useful to know what either might be.[22] Furthermore, early in 1972, the COS identified the need for a small increase in funding for the project definition stage of Super Antelope, and ministers would have to clear this. Admiral Peter Hill-Norton, the Chief of Defence Staff (CDS), asked the Defence Policy Staff (DPS) to prepare a submission for ministers, 'necessary as a vehicle for obtaining the modest increase in financial authority for the Super Antelope project'.[23]

[18] Trend to Heath, 5 Mar. 1971, PREM15/789.
[19] MOD, Second Interim Report, 22 Feb. 1971, CAB130/506.
[20] Douglas-Home to Heath, 19 Apr. 1971, PREM15/787.
[21] Cromer tel. no.1466, 28 Apr. 1971, PREM15/787.
[22] Chiefs of Staff, Strategic Nuclear Deterrent Force, 6 Dec, 1971, COS MISC514/16/12/71, DEFE4/264.
[23] Hill-Norton note, 17 Mar. 1972, DEFE4/266.

The resulting paper explicitly aimed to show 'the advantages of having a deterrent, and the disadvantages of not having one'. As the DPS saw it, the advantages rested on the need to be able to act independently in extremis. The DPS argued that given uncertainty as to whether the Americans could defend Europe in the event of a conventional Soviet attack: 'the ultimate reason for the possession of strategic nuclear weapons by any Western nation is to ensure its own independence and survival by deterring an attack on itself'.[24] Hill-Norton added that Britain needed a credible deterrent as a stand-alone power, because Britain could never be absolutely certain that it would be able to rely on America. In the COS meeting on 18 April 1972, he said: 'the over-riding factor was one of national sovereignty. Did they believe that they could, in the last resort, entirely depend upon others credibly to provide the ultimate counter to the ultimate threat to our national survival?' He continued:

> an answer of yes implied a preparedness to place a fundamental part of our defence in the hands of another nation – for ever, and they should fully appreciate the profound and far reaching consequences of doing so.[25]

With the exception of Sir Michael Carver, the Chief of General Staff, the COS agreed with Hill-Norton, but they disputed the extent to which they could present the issue to ministers as one of national survival versus an alliance role. If ministers were given an all or nothing choice of upgrading or allowing the deterrent to wither, then they could choose nothing. Moreover, as the MOD's Chief Scientific Adviser (CSA) Sir Hermann Bondi pointed out, it was difficult for the government to base policy on a rationale that they could not state in public. This rationale was that in order to be credible Britain needed the deterrent to have the capability, by itself, to destroy Moscow.

The COS' debate revolved around this point. Carver was concerned that too many resources diverted to nuclear power would detract from Britain's conventional capability. He took issue with the need to destroy Moscow and believed that deterrence offered by NATO was enough.[26] He argued that Britain's weapon could not be thought of as a deterrent, because it would never be used and nobody could realistically believe in its use. Using it would either precipitate an all-out nuclear strike, or Britain would have already been destroyed:

> He doubted the credibility of an independent UK strategic nuclear deterrent, either in our own or in Soviet minds, because of its dependence on the political will to use such a last resort measure. If it were to be used when Europe was attacked it would represent the voice of suicide; if used when Europe had been overrun or we ourselves were under attack, it would be the voice from the grave.[27]

[24] DP11/72, 'The Rationale', 11 Apr. 1972, DEFE4/267.
[25] COS(72)14th, 18 Apr. 1972, DEFE4/267; Admiral Lord Hill-Norton, 'Return to a National Strategy', in John Baylis, ed., *Alternative Approaches to Defence Policy* (London: Macmillan, 1983), 92–116.
[26] General Sir Michael Carver, *A Policy for Peace* (London: Faber and Faber, 1982).
[27] COS(72)12th, 27 Mar. 1972, DEFE4/266.

Sir Denis Spotswood, the Chief of the Air Staff, argued that this was not the point. He suggested that what counted was less the actual capability to inflict unacceptable damage, than the ability to instil doubt in the minds of the enemy that it could happen. He pointed out Britain could not have a 'gold-plated' deterrent. Britain was not a superpower and had to make do 'with as much credibility as could be afforded'.[28] Moreover, Britain's role in Western Europe was essential, and in that sense Britain's possession of a nuclear weapon did reflect a continental commitment. If Britain abandoned the pursuit of independence, then France would be the only independently nuclear-tipped country in Western Europe. Allowing France to assume nuclear leadership would seriously question Britain's prestige: 'while the possession of a nuclear capability does not make Britain a superpower it does give her a special status among the second class powers, particularly in NATO and we believe will do so in the future enlarged European Community'.[29] But losing out to France would also undercut Britain's NATO strategy. Bondi argued:

> all our weapons existed to retain peace, and it would be a grave menace to peace if a lack of credibility in our nuclear deterrent encouraged Germany to develop her own. The Germans did not believe in the French deterrent capability and must have some doubts as to the will of the US to use her deterrent in aid of Germany.[30]

Thus, the Chiefs' discussion revealed some of the internal disagreements about how Britain's deterrent actually deterred. It was not the first time that this debate had been raised in central government. In 1970, Sir Solly Zuckerman, then the government's Chief Scientific Adviser, had questioned the rationale of the Polaris upgrade. First, he worried – an anxiety partly assuaged by the ABM Treaty of May 1972, which placed limits on the deployment of ABMs – that if the Europeans demanded ABMs of their own it would be the 'start of a slippery slope of endless proportions'.[31] He also pointed out the implicit assumption, as he saw it, in the 'Moscow criterion'. His assumptions about the UK's ability to survive a nuclear attack were bleak.[32] He argued that the Moscow criterion only made sense if the UK might want to strike first. 'The implication that we would strike first follows the unreal assumption that were we to strike after the Russians, there would still be a London or a Northwood from which to issue orders. Is it politically conceivable that we would in fact start an all-out nuclear exchange?' He argued that Britain could rely on a NATO role, with the ability to strike cities other than Moscow.[33]

[28] COS(72)12th, 27 Mar. 1972, DEFE4/266.
[29] DP11/72, 'The Rationale', 11 Apr. 1972, DEFE4/267.
[30] COS(72)12th, 27 Mar. 1972, DEFE4/266. These arguments were made in 1967 and repeated in the later 1970s, Peter Hennessy, *Cabinets and the Bomb* (Oxford: Oxford University Press, 2007), 236, 297.
[31] Zuckerman to Heath, 17 Jul. 1970, PREM15/1359.
[32] Solly Zuckerman, *Nuclear Illusion and Reality* (London: Collins, 1982); on the home defence plans that would have been implemented in the event of nuclear war, Peter Hennessy, *The Secret State: Preparing for the Worst, 1945–2010* (London: Penguin, 2010), 179–216.
[33] Zuckerman to Heath, 17 Jul. 1970, PREM15/1359.

The Cabinet Secretary, Sir Burke Trend, had agreed with Zuckerman when Zuckerman wanted to push for further studies of Anglo-French nuclear co-operation. However, Trend was very clear that it was not a good idea for the government to opt to do nothing. As Cabinet Secretary, Trend was crucial in articulating the concerns of the security establishment to central government. Trend was intensely political, a master of clarifying the political principles at stake and voicing them accordingly. Based on the COS study, Peter Carrington, the Minister for Defence, wrote to Heath on 11 April to update him on the options. As he guided Heath through Carrington's submission, Trend elected to sharpen the distinction the COS had tried to blur: the choice between upgrade or not. Trend argued: 'unless we are prepared to abandon an independent nuclear capability of our own, we shall soon have to decide – as you know – whether to improve the Polaris missile by the device comprised under the code word Super Antelope or to replace it by the more advanced Poseidon missile'. Whichever Britain chose ultimately, they had to authorise the immediate increase of up to £9m in funding for Super Antelope's project definition stage.[34]

The Chancellor, Anthony Barber, approved the additional increase, but also signalled concern at the spiralling future costs of the defence budget. He told Heath he was 'instinctively sympathetic' to the maintenance of an appropriate level of destruction but also argued that it 'should not be taken for granted'.[35] Trend countered: 'in one interpretation, those words could mean that we should so limit our future activity in this respect, primarily for reasons of cost, that our independent deterrent should become progressively less credible until it became wholly incredible'. Trend's concern was the security of the country, as he saw it, but he voiced the argument as a political one. Britain was not entering the nuclear race, but could not afford to lose the nuclear capability it already had. He also made a sharp party political point, a jibe at Wilson's difficulties with party opinion on nuclear questions, that the Conservatives should be more attuned to defending the realm than Labour:

> The issue, so defined, is not economic but political; and I should hope that for any British Government, but particularly perhaps for a Conservative government, it is politically self-evident that we should not allow ourselves to lose, or to be deprived of, an independent nuclear capability in the sense of a capability under our independent control. That seems to me so indispensable an attribute of a sovereign state in our position as to be beyond argument.[36]

Consequently, there was no question of principle. Any debates about the upgrade were debates of degree. Should Britain opt to buy Poseidon, or a variant of it, or proceed with Super Antelope? Trend accepted fully that in the last resort, Britain had to be able to stand alone. His argument was embedded in a deterrence frame of mind. Britain was a small island, it was vulnerable, and only the capacity to hit where it hurt would deter.

However, there was some arbitrariness about exactly how much destruction Britain needed. When, in 1962, the JIC put the case that destroying five cities would suffice,

[34] Trend to Heath, 17 Apr. 1972, PREM15/1359.
[35] Barber to Heath, 5 May 1972, PREM15/1359.
[36] Trend to Heath, 16 Jun. 1972, PREM14/1359.

rather than the forty of a COS paper in 1957, the circumspection in their judgement was clear.[37] Bombing forty cities was 'quite unacceptable' to the Soviet Union, as it would ensure that they could not recover ahead of the United States following nuclear war. Neutralising twenty would be an 'unacceptable blow'. Of the capacity to erase the top five, the JIC admitted that they 'cannot give a clear-cut answer', but that 'it would not be unreasonable to say that the Soviet leaders would consider that the certain destruction of their five largest cities would put them at an unacceptable disadvantage in relation to the United States'.[38] In 1972, based on the psychological importance of Moscow to the Soviets, the JIC argued it was sufficient to concentrate resources on the ability only to destroy the Soviet capital.[39] Hill-Norton summarised: 'Moscow is uniquely important in Soviet minds as the capital, the administrative focal point and the largest centre of population. Its destruction while not sufficient to cause a total breakdown of the governmental structure would cause considerable disruption and might threaten the political cohesion of the country'.[40]

The conclusion of the ABM Treaty, which permitted the Soviet Union to concentrate ABMs around Moscow and one other location, strengthened this rationale. It demonstrated the importance the Soviets attached to Moscow, and the Deputy Chief of Defence Staff concluded that 'whatever the specific importance of Moscow, a UK strategic deterrent must have the capacity to penetrate the appropriate Russian ABM system'.[41] Moreover, the intelligence community and defence establishment feared that as an all-out attack by the United States on the Soviet Union could overwhelm ABM defence, the Soviets could see the significance of ABMs as eliminating small nuclear forces. If the Russians knew that the British were targeting cities other than Moscow, it could lead them to discount the British deterrent.[42] If the Soviets chose to concentrate on picking off small nuclear forces, they could extend ABMs to targets other than Moscow, effectively rendering Britain's force obsolete. Hill-Norton concluded:

> the Russians could come to regard the prime purpose of their ABM system as defence against attack by small nuclear forces and that we need therefore to reckon on the likelihood of their trying to improve and extend their ABM cover within the limits set by the SAL agreement. In this case we would face similar penetration problems as exist in the case of Moscow for the majority of alternative targets.[43]

The discussions showed complexities in Britain's strategic posture. There were uncertainties about the future development of Soviet ABMs, uncertainties about what exactly would deter the Soviet Union and uncertainties about how precisely

[37] Baylis, 'British Nuclear Doctrine', 56–8.
[38] JIC (62)10, Effectiveness of the UK Deterrent, 23 Jan. 1962, included with papers in CAB190/40.
[39] UK Strategic Nuclear Force, paper by the Long-Term Working Party, Third Report, 3 Oct. 1972, DEFE11/792.
[40] Hill-Norton to Carrington, 9 Oct. 1972, DEFE11/792.
[41] INT33 (72)1, 30 May 1972, text of letter from DCDS, CAB190/40.
[42] UK Strategic Nuclear Force, paper by the Long-Term Working Party, Third Report, 3 Oct. 1972, Annex C, JIC A, The Effectiveness of the UK Nuclear Deterrent, DEFE11/792.
[43] Hill-Norton to Carrington, 9 Oct. 1972, DEFE11/792; Stoddart, 'Nuclear Targeting', 900.

the deterrent did its job of preventing an attack on the UK. Was it the fact of unacceptable destruction, or the possibility that this might happen that mattered? Would a NATO deterrent be enough? These were questions for which there could not be one cast-iron answer. There were limits on what anyone could divine about Soviet intentions.[44] British war planning was based upon the scenario of a gradual escalation of tensions, but there were obvious boundaries about what could be established about the inception of any nuclear exchange.[45] Perhaps understandably, given their roles, the responses of the JIC and the COS to these necessary limitations were to assume the future extension of dangers. The JIC presumed that the Soviets might seek to extend ABM coverage and might come totally to discount the British deterrent. They regarded the Soviet threat as the only real threat, but, as they saw it, they had to guard against British weakness. Only the maintenance of a credible independent deterrent would counter these risks.

The perceived strategic need for an independent nuclear weapon, that in extremis Britain could use itself, resulted from an understanding about how much destruction Britain needed in order to be able to deter the Soviet Union from attacking it. However, the argument was also political, particularly in the hands of Trend, who was a vital link conveying the COS and JIC arguments to Heath.

Trend's arguments were rooted in tradition, in a sense of Britain's proper place in world politics. As Peter Hennessy shows, this was 'the "standing alone" contingency, the memory of summer–autumn 1940 which Sir Frank Cooper, another long time MOD nuclear insider, reckoned always played powerfully on prime ministers' minds'.[46] 'Standing alone' incorporated many ideas. It was not just about prestige, as the idea of prestige was entangled with an understanding of Britain's cold war role. Britain's deterrent was a core part of the Anglo-American relationship, but it was also a hedge against American unreliability, and it reflected Britain's responsibility for the maintenance of European peace by balancing any potential German resurgence against the uncertainty, and weakness, of France. British sovereignty, and, as Trend implied, the practice of statecraft by a Conservative prime minister, was bound up with these particular ideas.[47] To be truly sovereign, and thus to be able to fulfil its particular, historically informed role, Britain needed to be thought to have the capacity to act alone.

[44] Peter Hennessy, *The Secret State: Whitehall and the Cold War* (London: Penguin, 2002), 5.

[45] See 'Possible Scale and Nature of a Soviet attack on the United Kingdom', COS Committee, Confidential Annex to COS(72)29th, 26 Sept. 1972, DEFE4/272. Extensive consideration of war planning in Hennessy, *Preparing for the Worst*, 217–57.

[46] Peter Hennessy, 'Cabinets and the Bomb': Sir Michael Quinlan Memorial Lecture, delivered to the Mile End Group, 3 February 2011, http://www.meg.qmul.ac.uk/pastevents/Hennessy%20-%20Lords/index.html (last visited 9 Jan. 2013).

[47] See also Nick Ritchie, 'Relinquishing Nuclear Weapons: Identities, Networks and the British Bomb', *International Affairs*, 86, 2 (2010), 470–1 for a discussion of the importance of 'responsibility' in British thinking about its nuclear status.

Hybrid/STAG, November 1972

Since the demise of the Anglo-French nuclear option, Heath had not clearly articulated his position on British nuclear weapons. However, by November 1972, if not before, it was evident that he accepted the need to upgrade. An MOD paper, presented to ministers in November 1972, argued that the options were to proceed with Super Antelope; or to go for a 'UK Poseidon', which involved buying Poseidon C3 missiles, including a MIRV capability, but using British warheads. The third, new option was Hybrid, rebranded STAG by Heath in December.[48] Hybrid/STAG was to replace Polaris with Poseidon C3 and use Super Antelope to improve both the warheads and the re-entry system.[49] This was the option Carrington now recommended.

The project definition stage of Super Antelope was proceeding satisfactorily, and it was the preferred option of Bondi, the MOD's Chief Scientific Adviser, as well as of the Atomic Weapons Research Establishment (AWRE). The Navy, however, favoured Poseidon. Partly, this was because they wanted commonality with American hardware. As the Americans moved to Poseidon, the Navy feared that if Britain fell behind they would not be able to catch up again later. It was also because Poseidon was operationally better. It had better range, and better capability should the Soviets develop the more sophisticated terminal ABM defence.[50] Poseidon, however, posed political problems and was more expensive than Super Antelope in the short term. President Nixon was personally supportive of selling Poseidon to the UK, but in the climate of the Strategic Arms Limitation Treaty (SALT), Congressional opinion could resist it.[51] For Britain, the purchase of Poseidon would underscore British links to America in a more obvious way than the continuation of Super Antelope and could choke off any possibility of Anglo-French nuclear co-operation on a successor system.

The MOD recommended Hybrid/STAG. Trend, aware of the internal divisions within the MOD, was suspicious about this. Hybrid/STAG had not been investigated as thoroughly. He commented that the Navy had always wanted Poseidon, and may have conceded in order to ensure access to some US hardware, if not all: 'Is one entitled to smell a rather uneasy compromise here, within the MOD itself?'[52] Trend counselled Heath that the government should not yet give up the possibility of the fully MIRVed Poseidon. With the presidential elections in the US expected to return Nixon with a large majority, he could now be willing to offer it.

The ministers present at the meeting – Heath, Carrington, the Foreign Secretary, Alec Douglas-Home and Barber – agreed to pursue Hybrid/STAG. Carrington dispensed with UK-Poseidon on political grounds. The US did not want to sell it,

[48] On the rebranding of Hybrid, Heath note, 1 Dec. 1972, DEFE13/1393. STAG could think itself lucky not to have been called Gnu or Ibex.
[49] Strategic Nuclear Options, MOD, 2 Nov. 1972, PREM15/1359.
[50] Trend to Heath, 10 Nov. 1972, PREM15/1359.
[51] Strategic Nuclear Options, MOD, 2 Nov. 1972, PREM15/1359.
[52] Trend to Heath, 10 Nov. 1972, PREM15/1359.

it was expensive, it would prevent a British research effort in re-entry vehicles and it would annoy the French. Compared to Super Antelope, Hybrid/STAG had better range and development potential against terminal defence. Carrington also argued that the costs of the upkeep of Polaris would rise dramatically after 1983, when it went out of service in the US. Consequently, it would be difficult to maintain Super Antelope in service much beyond 1985, whereas Hybrid/STAG would be operational until the mid-1990s. The overall cost of Hybrid/STAG would be less than Super Antelope, although over the next ten years it would be more expensive.[53]

Hybrid/STAG represented an internal compromise in the MOD, and it combined the operational benefits of Poseidon with the political balance the government sought between America and Europe. Despite the inauspicious outlook for Anglo-French co-operation, Carrington recommended a renewed effort to create a European defence organisation, linked to NATO but outside NATO, that could draw France more closely back into integrated Western European defence. He was concerned about pressures to reduce expenditure on conventional defence and anxious that détente might normalise Soviet power and allow the Soviets to pick the Western Europeans apart.[54] Carrington had told the Conservative Party Conference that British entry into the EC could galvanise opinion behind the creation of a European political grouping.[55] He knew that the chances of success were limited, but suggested the enticement of nuclear collaboration could persuade France to join such a grouping.[56] Thus, Heath consented to seek Nixon's views on selling Poseidon, and to request further investigation of the risks of Hybrid/STAG. He suggested that Carrington should keep the French defence minister, Michel Debré, informed, to avoid appearing to present the French with a *fait accompli*. There was still time for further consideration of options for the nuclear force that would follow Polaris/Poseidon.[57]

Hence, the political concerns that governed Heath's approach to the nuclear upgrade in 1970 and 1971 still counted. Britain signed the Treaty of Accession with the EC in January 1972, and the government was keen to make a good impression at the inaugural summit of the Nine in Paris in October 1972, a summit that many saw as the inception of a political European organisation.[58] Heath wanted to leave open the possibility of Anglo-French nuclear co-operation on a successor system, despite the unlikely prospect of success. He wanted to align the EC with the United States in a more equally weighted relationship, and did not want a too obvious tie between the

[53] Meeting, 14 Nov. 1972, PREM15/1359.

[54] JIC(A)(72)34, The Soviet Threat, 13 Oct. 1972, TNA CAB186/12; Anne Deighton, 'Ostpolitik or Westpolitik? British Foreign Policy, 1968–75', *International Affairs*, 74, 4 (1998), 899–900.

[55] 'Nuclear Force for Europe?', *The Times*, 23 Oct. 1972, 13; Ilaria Poggiolini, 'How the Heath Government Revised the European Lesson: British Transition to EC Membership, 1972', in Antonio Varsori, ed., *Inside the European Community: Actors and Policies in European Integration from the Rome Treaties to the Creation of the Snake* (Brussels: Bruylant, 2006), 322.

[56] Carrington to Heath, 3 Nov. 1972, PREM15/789.

[57] Meeting, 14 Nov. 1972, PREM15/1359.

[58] Daniel Möckli, *European Foreign Policy during the Cold War: Heath, Brandt, Pompidou and the Dream of Political Unity* (London: IB Tauris, 2009), 78–81.

US and Britain to jeopardise this. Hybrid-STAG appeared to fulfil Britain's military and political objectives.

Option M, February–July 1973

When Heath met Nixon in February 1973, the Americans made a new offer. There were considerable technological difficulties involved in de-MIRVing the Poseidon missile in order for it to take STAG. Consequently, Defence Secretary James Schlesinger offered Option M. This was that Britain would buy the Poseidon C3 missile, and would also buy the non-nuclear parts of the Mark III re-entry vehicle and warhead. For the nuclear parts of the warhead, the US would supply designs and the British would manufacture them in the UK.[59] The Mark III warhead was lighter and much faster, and more could be carried on an individual missile; but because the British would be reliant upon American designs, it would underscore British dependence upon America.[60] While technical difficulties with Hybrid/STAG were one reason for the shift, another was that Super Antelope technology had less development potential against terminal defence.

The Americans had picked up a comment on the fringes of SALT that the Soviets might be able to deploy terminal ABM defences around Moscow much more quickly than anticipated.[61] Trend queried this, but if it were correct, the technology of Super Antelope could become obsolete in three or four years.[62] Victor Macklen, the Deputy Chief Scientific Adviser at the MOD, advised caution. He suggested that the Russians could have said that they had a sprint type terminal defence on the drawing board for any number of reasons. He saw no case to revise the earlier judgement that there would be time to develop STAG to cope with advances in Russian defence. Moreover, 'provided we kept the details of our actual improvement secret the Russians could not be sure. . .and absolute certainty to the defence is quite a different calculation from absolute certainty for the attacker'.[63]

Option M crystallised the splits in the MOD as to how to proceed. The Navy wanted Option M for its operational advantages and commonality with US hardware. Hill-Norton recommended an immediate decision in favour, in order to strengthen the President's hand in securing the Presidential determination necessary to release information about it.[64] Bondi supported Super Antelope. He disputed whether the cost of the upkeep of Polaris would be prohibitive after it went out of service in the US.[65] British independence in warhead research would decline and Option M illustrated British reliance upon the Americans.[66]

[59] Polaris Improvement, Draft A to Prime Minister, 16 Mar. 1973, DEFE13/1293.
[60] Trend memo, Annex, 1 May 1973, PREM15/1360.
[61] Ibid.
[62] Ibid.
[63] Macklen to Carrington, 16 Mar.1973, DEFE11/792.
[64] Controller of the Navy note, 16 Mar. 1973, DEFE13/1293.
[65] Bondi paper, 13 Apr. 1973, DEFE12/1392.
[66] Ibid.

These political doubts worried central government. Cromer remarked that as the White House had gone as far as to offer it, if Britain did not accept it, 'the Americans are likely to conclude that we and the French would prefer some kind of European nuclear wilderness to the Atlantic Alliance'.[67] Trend speculated that one American motivation could be to ensure British subservience: 'we shall gradually cease to be an independent competitor in this particular technological race'.[68] Option M would also reduce any freedom of manoeuvre Britain had to court the French. The US would be unlikely to wish to supply Poseidon technology to France to facilitate a trilateral agreement. Trend noted that the French Foreign Minister, Michel Jobert, commented: 'a decision by us to buy Poseidon would postpone Anglo-French co-operation into the next century'.[69] There was also the rather more practical problem that Nixon would have to request a Presidential determination in order to release information to Britain about Option M. The Presidential determination would require the consent of the Joint Committee on Atomic Energy (JCAE). It could take time and the determination would also make the option public.[70]

In April, Carrington remained non-committal, but the government felt that Heath could not decisively tell Nixon Britain wanted Option M.[71] Even though the diplomacy connected with the Year of Europe was beginning to get acrimonious, the British continued to talk to their American counterparts about the possibilities.[72] Kissinger explained to Trend that he and Nixon wanted to help Britain's nuclear deterrent as 'reinsurance' against loss of nerve on the part of a future American Presidency. If American administrations were unable to sustain America's commitment to Western Europe, then the Soviets would have to bank on being able to eliminate more than one nuclear rival.[73] In June, developments in SALT led the British to wonder if Nixon would sell the fully MIRVed Poseidon. This would circumvent the technical risks involved in de-MIRVing the Poseidon for sale for Option M.[74] However, as the fall-out of Watergate began to tighten around the President, Cromer indicated that the President would be 'mighty relieved' if Heath did not press for it. 'Congressional uproar was certain' and the President did not want to face this in his 'present weakened position'.[75]

In addition to the political difficulties, the main constraining factor on a British decision was cost. Growth and inflation in the UK accelerated and expenditure cuts became vital. In May 1973 Barber announced immediate savings of £500m.[76] As part of this drive, Carrington conceded that the money for the nuclear upgrade would

[67] Cromer to Douglas-Home, 23 Apr. 1973, PREM15/1362.
[68] Trend to Heath, 5 Mar. 1973, PREM15/1359.
[69] Trend memo, Annex, 1 May 1973, PREM15/1360.
[70] Polaris Improvement, Draft A to Prime Minister, 16 Mar. 1973, DEFE13/1293.
[71] Note for the record, 19 Apr. 1973, DEFE13/1293.
[72] Contrary to the argument taken by Thomas Robb, 'Antelope, Poseidon or a Hybrid: The Upgrading of the British Strategic Deterrent, 1970–4', *Journal of Strategic Studies*, 33, 6 (2011), 805–9.
[73] Kissinger to Trend, 24 Apr. 1973, PREM15/1360.
[74] Carrington to Heath, 8 Jun. 1973, PREM15/1360.
[75] Washington tel. 2055, 1 Jul. 1973, PREM15/1360.
[76] Philip Ziegler, *Edward Heath: The Authorised Biography* (London: Harper, 2010), 407.

no longer come from reserved funds, but would be included within the defence budget. Consequently, an expensive upgrade could mean reductions in conventional forces.[77] Cost-wise, Option M was more expensive in the critical period of the Long-Term Costings (LTC): the excess in 1973–8 over the base cost of maintaining unimproved Polaris was £193m as compared to Super Antelope's £72m. Carrington also speculated that a new administration 'of a different political complexion' might not be able or willing to sustain Option M.[78]

By July, the government conceded that the French were only thinking 'very long term' about collaboration.[79] Heath met Pompidou at the end of May, and tentative suggestions for an official study into subsequent collaboration led nowhere. Pompidou subsequently agreed with Nixon at Reykjavik to explore American–French co-operation, and this reduced further the already limited attraction of any agreement with Britain. The removal of the French option, however, did not lead the government to a more insistent tilt towards the Americans. Carrington recorded that the balance of opinion between options was very fine. Did the undoubted technical advantages of Option M outweigh the financial disadvantages and the political concerns?[80] Trend was in favour of Option M: 'if you believe, as I do, that the critical consideration in exercise of choice is the ultimate safety of this country, Option M is best'. Britain was dependent upon America, and it might as well accept this fact while the offer was good.[81] Ministers deferred a decision. Heath said that the problems were complicated and they would try to take a decision soon.[82]

The offer of Option M meant that nuclear ties with America, and the question of whether to buy Poseidon, assumed a more central place in British deliberations. Thus, although Anglo-American relations worsened after Kissinger launched the Year of Europe, discussions between the two administrations about Option M and Poseidon increased. At the same time, the tensions in Heath's broader political strategy became more acute. The Year of Europe made it virtually impossible for Heath to be able to lean towards France while sustaining cordial relations with Nixon and Kissinger.[83] After May 1973, it was clear that Pompidou did not want to co-operate with Britain in matters nuclear. Added to concerns about cost, and internal disagreements about whether Britain needed Option M or whether Super Antelope was better, Britain's policy reached an impasse. The issues were complex and could not yet be resolved.

Super Antelope, August–October 1973

In the final three months before the decision was taken, the government's primary concern was cost. Early in September, a statement that the Russians had acquired

[77] Note for the record, 19 Apr. 1973, DEFE13/1293.
[78] Ministerial meeting, 13 Jun. 1973, DEFE12/792.
[79] Meeting, 13 Jul. 1973, DEFE12/792.
[80] Carrington to Heath, 13 Jul. 1973, PREM15/1360.
[81] Trend to Heath, 13 Jul. 1973, PREM15/1360.
[82] Meeting, 13 Jul. 1973, DEFE12/792.
[83] Hynes, *The Year,* 102–47.

MIRVs led to more conjecture that the US might be willing to supply Britain with a fully MIRVed Poseidon. Further soundings reiterated the significance of Watergate: the chances were 50–50, or at best '60–40'.[84] The burdens of government were also felt in Britain, as Carrington's gloomy rejoinder about what a Labour administration would do to the deterrent demonstrated. A private meeting with the miners' leader Joe Gormley in July indicated that the miners might not be content with the final phase of Heath's pay policy, due to be implemented in October.[85] Heath did not feel secure, fearing a determined effort by the Communist Party of Great Britain to unseat the top of political authority in Britain.[86] In August, he commented to Trend that there were 'present attempts to create a Watergate atmosphere in this country'.[87]

Thus, in the context of the need to reduce public expenditure by a government that felt fragile, the cost of the nuclear options was politically sensitive. On 12 September, ministers met again and Heath indicated that while they would release funds for the continuation of Super Antelope, they needed urgently to resolve the implications of the Polaris upgrade for the defence budget overall.[88] Barber was adamant that it was necessary progressively to reduce the proportion of expenditure devoted to defence. Currently it stood at 5.5% of GNP, the highest level in NATO, although Britain was only the eleventh wealthiest country in NATO. France devoted 4.2% of GNP and Germany 3.8%. Barber wanted to reduce Britain's proportion to 4.5% by 1977/8. Failure to do so, he argued, could be dire: 'it would undermine our industrial and economic capacity to play our part in the building of Europe'.[89] Carrington countered that to do so would renege on 'everything we have fought for over the last three years', and would seriously curtail Britain's ability to maintain a role in NATO and conventional force levels in Western Europe.[90]

A further factor was that there was no compelling public case to justify the purchase of Poseidon. There was no public information about the upgrade programme, and the Labour opposition would surely have made political capital from an announcement to spend money on Poseidon. Following a motion from Gormley at the 1972 Labour Party conference to demand the removal of American nuclear bases from Britain, Labour's National Executive Committee had conceded that Labour would seek the removal of the base at Holy Loch.[91] In August, the House of Commons Expenditure Committee published a report. Without access to the same intelligence reports as the government, it assessed that Polaris (unimproved) had an 81% chance of hitting its targets, and hence, that it was 'adequate' to keep Polaris in service. The purchase of a MIRVed Poseidon or the pursuit of a MIRV programme in the UK would constitute

[84] Carrington to Heath, 10 Sept. 1973, PREM15/2038.
[85] Ziegler, *Edward Heath*, 413.
[86] Christopher Andrew, *Defence of the Realm: The Authorised History of MI5* (London: Penguin, 2005), 594–9.
[87] Heath to Trend, 21 Aug. 1973, PREM15/2130.
[88] Meeting, 12 Sept. 1973, DEFE25/334.
[89] Barber to Heath, 10 Sept. 1973, PREM15/2038.
[90] Carrington to Heath, 17 Aug. 1973, PREM15/1360.
[91] 'NUM Demand Withdrawal of All Nuclear Bases, *The Times*, 5 Oct. 1972, 7'; 'Party defeats Callaghan over Holy Loch', *The Times*, 19 Apr. 1973, 4.

an 'expensive luxury'.[92] Arthur Hockaday, the Assistant Under-Secretary of State in the MOD, commented that the report placed the 'onus of proof that it would be worthwhile for Britain to acquire Poseidon ... on those who might wish to make that change'.[93]

By the end of October, the financial considerations, and the anxieties about Watergate's effect on the President, overrode the technical case for Option M. Sir John Hunt, who took over as Cabinet Secretary following Trend's retirement, recorded 'grave doubts' that Nixon would be able to secure Congressional agreement for the sale of the de-MIRVed Poseidon.[94] Although there were risks of the enhanced cost of Polaris once the Americans stopped using it, there were also doubts about the cost of the dispensing mechanism for Option M.[95] Finally, 'there was no change in the technological considerations, but the financial situation was more serious'. The Middle East War and the rise in the cost of oil stoked inflation and strengthened the hands of the miners, who were unhappy about the pay deal on offer. With more strikes on the horizon, and with the urgent need to reduce public spending, it mattered that Option M cost more than Super Antelope in the spending projected between 1975 and 1978, even though the differences were not that great.[96]

In their meeting on 30 October, Heath, Carrington, Douglas Home and Barber agreed that Super Antelope was adequate for now. It involved fewer risks – so they thought – and it demanded less initial financial outlay and less dollar expenditure. Britain's independent research effort would be sustained and, while ministers felt that this would be more credible if they could reach an agreement with the French, they also noted that American agreements meant that Britain could not pass warhead information to France anyway.[97] Hunt suggested a parliamentary announcement to Heath. However, Kissinger's 'tantrums' over the Year of Europe led Hunt to urge that Britain should not yet reveal its decision to the Americans and consequently, an announcement to the House was delayed.[98] Hunt raised it again with Heath in February, suggesting that the planned statement in the Defence White Paper should now be withheld until after the February 1974 election.[99] It was left to the Labour government Carrington had anticipated to agree to continue with Super Antelope, but also to evade the declaration of the upgrade programme to the House of Commons.

[92] Hansard, House of Commons, Paper 399. Twelfth Report of Expenditure Committee, Together with the Minutes of the Evidence taken before the Defence and External Affairs Sub-Committee, Tuesday 13 and 27 Feb. 1973, Nuclear Weapon Programme, paras 15–19. David Owen, 'Nuclear defence: A Chance to Save Now and Benefit Later', *The Times*, 23 Aug. 1973, 14.

[93] Hockaday brief, 10 Sept. 1973, DEFE25/334.

[94] Hunt to Heath, 29 Oct. 1973, PREM15/2038.

[95] Discussion between Bondi and Hill-Norton, 23 Jul. 1973, DEFE11/792.

[96] Hunt to Heath, 29 Oct. 1973, PREM15/2038.

[97] Meeting, 30 Oct. 1973, PREM15/2038.

[98] Hunt to Heath, 29 Oct. 1973, PREM15/2038.

[99] Hunt to Heath, 7 Feb. 1974, PREM15/2038.

Conclusions

The decision in favour of Super Antelope has been regarded as a lowest common denominator decision. In 1980, Lawrence Freedman wrote that the advantages of Super Antelope over variants of Poseidon were negative ones. It cost less and it avoided a public purchase of MIRVed missiles from the US.[100] This judgement has considerable merit. Ministers took the decision about Super Antelope in circumstances that were far from optimum and by October 1973, there is no doubt that expense was a dominant consideration. However, the assessment prioritises the fact that Option M or the fully MIRVed Poseidon were technically superior to Super Antelope. Freedman thus suggests that, if the government could have afforded Poseidon, and if the international circumstances had been more favourable, they would have wanted to buy it. Documentary evidence not available to Freedman suggests that this was not necessarily the case. The political and economic climate of the early 1970s created considerable uncertainties. The Heath government wanted to join the EC, and perhaps to reconfigure the European–Atlantic relationship. Whitehall was divided about the best course of action. There were reasons not to try to buy Poseidon, and the existence of Super Antelope provided an option that was adequate at the time.

Why did the British seek to upgrade at all? Crucial to the decision was the judgement that Britain must have a nuclear weapon that allowed it an independent role. It was not enough to be just another member of NATO. As Sir Burke Trend put it, Britain needed a deterrent capable of destroying Moscow in order to deter the Soviet Union and, at the moment of the last resort, to be able to stand alone. Trend's argument was embedded in concerns about security, but it was also an expression of British identity: of British prestige, and of what Britain should do to play its proper part in the defence of Western Europe and the cold war West overall. There was an overlap between security and identity. Britain's power, including the ability to defend itself in extremis, was bound up in the continued possession of an independent nuclear weapon. Whatever Heath thought about Europe, this was a given, a line in the sand he would not cross.

The decision to upgrade also privileged elements of British nuclear opinion that anticipated the future extension of threats. This too was rooted in fears for British security, but was also political. Whitehall did not think with one mind about the need to lay waste to Moscow, but the arguments of those such as Zuckerman, Carver or Macklen – who suggested that the doubt of the enemy was more significant than the actual capability – did not gain currency. Exactly what the Soviets intended was unknowable, and thus it was a necessary precaution to guard against future contingencies, in so far as it was possible. Intelligence and the COS also assumed that the Soviets could extend ABM coverage to areas beyond Moscow. If they did, Britain's unimproved deterrent would not be able to hit targets outside Moscow either, and would rapidly become irrelevant. Essentially, no prime minister wanted to be the one who left gaps in Britain's defence that could not be filled again later.

[100] Lawrence Freedman, *Britain and Nuclear Weapons* (London: PaperMac, 1980), 50.

Why did Britain choose Super Antelope? Like Wilson, Heath did not want to draw attention to the Anglo-American nuclear relationship, lest the ghost of Nassau should haunt him in the pressing need to secure accession to the EC. Heath was also more committed to the ideal of a political Europe than Wilson, and he wanted to promote Anglo-French nuclear co-operation as the core of a reinvigorated European political identity that would rebalance the American–European relationship.[101] Obvious desire to buy Poseidon would jeopardise these objectives but, even if Heath had been determined to purchase it, there would have been no guarantee, in the climate of détente, that the American President would have been willing to sell it.

Only from February 1973 onwards did the sale of Poseidon become more frequently discussed between Britain and America. This was in response to the Heath government's request for Hybrid/STAG and reflected the refreshed interest in Europe taken by the Nixon administration at that point.[102] Even then, and particularly because Option M would illustrate British dependence upon America politically, and would also weaken Britain's independent research effort, the British administration was divided as to whether they wanted it.

Thus, it was always improbable that the government was going to buy Poseidon. But three rather specific, interrelated, crises made it impossible. The first, and least important to Super Antelope, was the Year of Europe. The crisis initially had no impact on discussions between Britain and the US, but by the late summer Kissinger wanted to use nuclear blackmail to force Britain and France into acquiescence.[103] While there is no mention of this in the preparatory papers, nor during the meeting on 30 October, it clearly made sense not to stride into Kissinger's line of fire by repeated requests for nuclear hardware.

More important was the economic crisis in Britain. Heath could have afforded Poseidon, but the politics of buying it would have brought unwelcome political attention. The Organisation of Petroleum Exporting Countries (OPEC) announced the oil price rise on 16 October. On 23 October Gormley told Heath the miners had rejected their pay deal and would strike. The government feared that fuel could run out. A record trade deficit, a credit squeeze and the three-day week were just around the corner.[104] Fearing that the national infrastructure could collapse, Heath could not risk a high-profile purchase of a weapon when the case for that weapon had not been publicly made. The third factor was the Watergate crisis, which weakened

[101] Also Rossbach, *Heath, Nixon*, 84–114.

[102] Claudia Hiepel, 'Kissinger's Year of Europe: A Challenge for the EC and the Franco-German Relationship', 281; Pascaline Winand, 'Loaded Words and Disputed Meanings: The Year of Europe Speech and its Genesis from an American Perspective', in Jan van der Harst, ed., *Beyond the Customs Union: The European Community's Quest for Deepening, Widening and Completion, 1969–1975* (Brussels: Bruylant, 2007), 305.

[103] Robb, 'Antelope, Poseidon', 811–2; Robb, 'The Tangled Skein', 308–10.

[104] Dominic Sandbrook, *States of Emergency: The Way We Were: Britain, 1970–4* (London: Allen Lane, 2010), 578–9.

Nixon's authority, made him wary to take on Congress, and ultimately forced him to resign.[105]

Why did the politics of the Super Antelope decision matter? Much has been made of the distinction between the 'European' and 'Anglo-American' outlooks in Britain's foreign policy and it has generally been held that Heath preferred the former at the expense of the latter.[106] Once the Year of Europe made it impossible for Heath to tilt towards France in order to reweight the American–European relationship, and after the oil price shock, Heath resumed traditional Anglo-American ties.[107]

Recent research emphasises that the European and the Atlantic spheres in Heath's foreign policy were always intimately entangled. Heath undoubtedly did want to prioritise Europe in Britain's foreign relations, but he never wanted to jettison the Anglo-American relationship. Rather, he sought to consolidate British influence in America through extended influence in the EC. Britain's security interests were inevitably bound up with America's.[108] Study of nuclear policy confirms this. Despite his will to seek co-operation with France on a successor nuclear weapons system, Heath never stepped outside an accepted centre ground that Britain should be a power with international reach. Even if Heath's idea of Anglo-French nuclear collaboration had become a political reality, it would have had to have taken place within the framework of the Anglo-American and American–French nuclear relationships. Heath's political vision overlay, but did not replace, this core understanding of Britain's interests.

Secondly, the decision to proceed with Super Antelope was not everyone's preferred option, but it did not only denote the reluctant acceptance of a less preferable choice. The decision-making process was lengthy and extremely complex. The options were often unclear as more details were necessary to know exactly what was on offer and whether it would work. Because of this, and also because Heath was interested mainly in Anglo-French co-operation, central government's decision-making about Polaris was reactive, at least until the 30 October meeting. International détente, Britain's advance into the EC and the sense of uncertainty about America's ability to sell it meant a compelling case for buying Poseidon, or a variant of it, was never seriously made outside defence circles. At the point at which Britain could

[105] Dominic Sandbrook, 'The Influence of Domestic Policy and Watergate', in Frederick Logevall and Andrew Preston, eds, *Nixon in the World: American Foreign Relations, 1969–77* (Oxford: Oxford University Press, 2008), 98–101.

[106] For example, John Campbell, *Edward Heath: A Biography* (London: Pimlico, 1994), 341.

[107] Hamilton, 'Britain, France', 880–8; Alastair Noble, 'Kissinger's Year of Europe, Britain's Year of Choice', in Matthias Schultz and Thomas A. Schwartz, eds, *The Strained Alliance: US–European Relations from Nixon to Carter* (Cambridge: Cambridge University Press, 2009), 221–36.

[108] Christopher Hill and Christopher Lord, 'The Foreign Policy of the Heath Government' in Stuart Ball and Anthony Seldon, eds, *The Heath Government, 1970–1974: A Reappraisal* (London: Longman, 1996), 305–9; Rossbach, *Heath, Nixon*; Eduardo Sourvillo, 'Caught in the Middle of the Transatlantic Security Dilemma: Great Britain, the United States and Western European Security, 1970–73', *Journal of Transatlantic Studies*, 8, 1 (2010), 69–82; Alex Spelling, 'Edward Heath and Anglo-American Relations: A Reappraisal', *Diplomacy and Statecraft*, 20, 4 (2009), 638–58; Thomas Robb, 'The Power of Oil: Edward Heath, the Year of Europe and the Anglo-American Special Relationship', *Contemporary British History*, 26, 1 (2012), 73–96.

perhaps have made a play for it – 1973 – Watergate and domestic economic problems effectively ruled it out.

The crisis of Autumn 1973 was to an extent one of transatlantic leadership. Neither Heath nor Nixon would have been able to convince political or public opinion of the merits of buying or selling Poseidon, partly because their respective positions were extremely brittle. But they also could not have done it because détente and Britain's EC membership meant that international circumstances appeared to be changing. They had not made a case for the purchase or sale of Poseidon, and therefore it would have been difficult to counter opposition in both Britain and America. Opponents in America would have seen the sale of Poseidon as proliferation at a time of superpower arms control, and would have queried the need to uprate European nuclear arsenals in this manner. In the House of Commons, there would have been surprise and criticism of Britain's too-explicit links to America, and severe opposition to expenditure on a weapon at a time of national economic crisis. In the UK, nobody knew about Super Antelope outside the immediate decision-making circles. This secrecy was not so much a deliberate cover-up, but because of concerns about the timing of an announcement. However, it was obvious that, particularly at this fragile moment, it was politically easier not to draw public attention to the expense and the implications of the upgrade. The House of Commons report had argued that Polaris was sufficient as it was.

The British could have waited for a more propitious time to make a decision. But a firm selection had already been delayed. The government needed to ensure that Polaris would be upgraded and did not want to leave the choice to another administration. Super Antelope permitted the British to sustain an independent nuclear deterrent capable of destroying Moscow. It terminated the long deliberation. It continued the traditions of Anglo-American collaboration in nuclear weaponry, while avoiding a public show of it. It sustained a British research effort and stemmed a difficult political argument about cost.

Like membership of the EC, Super Antelope was not as great a change as it appeared to those who favoured Poseidon or prioritised the Anglo-American relationship. The more radical alternative would have been not to upgrade, to concentrate Britain's nuclear role in NATO, or to have accepted the gradual demise of a British nuclear weapon. The choice of Super Antelope was another route to the same goal of British nuclear independence through interdependence, and the preservation of British security and Britain's international power in a cold war environment.

Politique et modernisation des missiles nucléaires Polaris, 1970–1974

C'est sous un éclairage politique que cet article examine ce qui a motivé le gouvernement britannique d'Edward Heath à investir dans des missiles nucléaires Polaris modernisés et ce qui l'a poussé à opter pour le programme Super Antelope pour améliorer la partie antérieure des missiles contre les défenses antimissiles balistiques soviétiques, de préférence aux autres options disponibles. Selon cet article, on n'a pas encore entièrement cerné le contexte politique dans lequel Edward Heath a pris cette décision. En acceptant le 'critère de Moscou', une conception selon laquelle la Grande-Bretagne devait disposer de la capacité de détruire la capitale soviétique, le gouvernement britannique ne faisait en effet que s'inscrire dans la continuité de sa politique de la guerre froide.

Die politischen Überlegungen zur Aufrüstung von Polaris (1970–74)

Dieser Beitrag setzt sich unter einem politischen Blickwinkel mit der Frage auseinander, warum die britische Regierung unter Premierminister Edward Heath Polaris aufrüsten wollte und dabei ein Programm namens 'Super Antelope', bei dem verbesserte Sprengköpfe zur Überwindung des sowjetischen Raketenabwehrschilds zum Einsatz kommen sollten, gegenüber den übrigen gangbaren Alternativen bevorzugte. Er vertritt die These, dass die politischen Gegebenheiten, unter denen Heath die Entscheidung traf, nur unzureichend verstanden wurden, und zeigt, dass die Verständigung der Regierung auf das sogenannte 'Moscow Criterion' – Großbritannien sollte im Ernstfall in der Lage sein, Moskau zu zerstören – Ausdruck einer Kontinuität in der britischen Haltung zum Kalten Krieg war.