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Chaos or Consolidation - the way to ESA

INTRODUCTION

After the Second World War, the development of space technologies became an important field for the leading powers in the world. The Sputnik shock 1957 in which the Soviet Union proved that they could put a satellite into orbit or the moon landing by the United States were important technological jumps. They permeated the Cold War in that they proved access to cutting-edge technology to the respective competitor and they underpinned the leadership of the United States and the Soviet Union with their allies. Such endeavours required substantial resources which were not available to medium powers such as France and Britain, at least not in the pioneering stage of such developments. However, just as for nuclear capabilities both Britain and France realised that such key technologies were a must-have for them for reasons which will be analysed in detail in the main body of this text. They realised, however, the cost of a fully fledged space programme could not be borne by any of them alone. Against this backdrop, this paper will show the early bilateral cooperation which finally led to the wider project of the European Space Agency.

METHODOLOGY

This paper will use parliamentary speeches from France and Britain as the only primary source in the main body and secondary sources only very sparsely in the introduction and the conclusion, because they provide a full picture and secondary literature can remain in its role of providing supporting details. Britain and France were the main drivers in the space sector and major players in the Cold War to the extent that the third major industrial power in Western Europe, Germany, was not. Although space technologies have always been tainted by their dual-use potential, entailing the secrecy of the military side of affairs, the positioning of the two nations towards a space policy required a wide consensus, not least from the tax payer. Therefore these issues were widely discussed in the respective parliaments, which make the minutes of these debates the ideal source to get a comprehensive picture of the process of determining a national position in space policy. All debates considering space affairs were consulted, for the period between 1971 and 1975, leading up to the foundation of ESA. Some quotations have relevance for several aspects (nodal points) considered in this paper and were therefore used more than once, which shows the pertinence of the selected source. This paper will also pay particular attention to the contribution of the relatively separate national discourses into a European discourse. For that purpose the analyt-

ical tools of discourse theory will be applied.

ANTAGONISM

One core theme of Discourse Theory is the constitutive role of Antagonism in social life. Laclau and Mouffe argue that Antagonism performs a constitutive role for a society, by defining itself against an outside 'other'.¹ The use of Antagonism as an analytical tool enables the evaluation of current EU policy. The 'other' can be the past, as frequently happened in European integration. For example, post-war Germany defined itself in opposition to its Nazi-past; the same is true for the 4th Republic in France in its definition against Vichy France and its Nazi-collaborators; and even in Britain the Appeasement policy of the Chamberlain Government became a formidable cornerstone of what should never happen again.² The 'other' may also be another state, for example, the Antagonism between the US and the USSR during the Cold War. The race to the moon between the two super powers can be seen as a prime example where antagonism spurred the United States to greater achievement. One structural problem with Laclau and Mouffe's concept of Antagonism is that it often describes inner-societal affairs. Particularly David Howarth's later refinement of social Antagonism bears this hallmark of inner-societal struggle.³ However, these aspects of Antagonism bear some striking similarities with the other core concept of Discourse Theory, i.e. Hegemony which will be explained in the next section. In this paper antagonism will be used exclusively for the external dimension and hegemony for the internal dimension, as explained below.

HEGEMONY

Laclau and Mouffe define their second key concept, Hegemony, in *Hegemony and Socialist strategy*.⁴ While Antagonism covers the external dimension, Hegemony deals with internal contest, i.e. politics. Both concepts are linked in that they identify the political 'contest'. Hegemonization is the term applied to the political process by which the dominance of political ideas is established. It represents a struggle for the dominant norms and values within society, but one which is facilitated by discussion and political debate from which those shared values may emerge. Further struggle may occur within the political debate and subsequently the norms of the discourse may be

¹ Chantal Mouffe, *The Return of the Political*, p. 2.

² For a comprehensive explanation see Thomas Hoerber, 'Refinements of Antagonism in Discourse Theory for European Studies', in: *Journal of European Integration History*, Issue 2, Vol. 18, December 2012, pp. 207-219

³ David Howarth (ed.), *Discourse Theory and Political Analysis: Identities, Hegemonies and Social Change*, MUP, Manchester, 2000, see also, David Howarth and Jacob Torfing, (eds.), *Discourse Theory in European Politics*. Palgrave, Basingstoke, 2005, p. 15

⁴ Ernesto Laclau, Chantal Mouffe, *Hegemony and Socialist Strategy*.

confirmed or changed. The process of hegemonization recognises the conditions in society which allow for change yet at the same time provides the context for stability.⁵ A good example of this inner-European contest is whether the Americans should be seen as competitors in the space sector or as partners. Usually, Britain tended more towards the partnership side and France saw the US more as a competitor, but that was not always the case and the Americans themselves were demanding a European space effort, in addition to that. This example which will be dealt with in more detail later on shows the blurring of the internal/external distinction between Hegemony and Antagonism. The discourse about the sense and the direction of European integration after World War II was becoming an inner-European discourse while it was led, at the same time, between different nation states. The space sector shows that very nicely.

NODAL POINTS

The third theme which Laclau and Mouffe identify is that of creation of 'Floating Signifiers' or 'Nodal Points' in the discourse.⁶ These lead to the creation of centres of political focus in a discursive field acting as an ordering mechanism in the discourse.⁷ The more Hegemony a political group has over a Nodal Point the more powerful it is in politics.⁸ Hegemonizing a Nodal Point also allows the dominant political group to modify societal core values, such as behavioural patterns, for example the term 'Europe' lacks meaning, therefore political forces compete to modify the content of this word, which in turn embodies the political process and also facilitates it. An example of hegemonisation would be the contest over a "European" launcher, i.e. the first failed projects of the British Blue Streak or the French Europa II and II launchers, and finally the acceptance of the Ariane, albeit with some misgivings on the British side.

RESEARCH QUESTION

These analytical tools will be used to answer the research question of this paper. What developments lead to foundation of the European Space Agency (ESA); what were the necessities nation states could not provide for themselves; and was that the rationale which pushed them for a European solution?

⁵ Thomas Diez, 'Speaking 'Europe'', p. 603, see also, David Howarth and Jacob Torfing, (eds.), *Discourse Theory in European Politics*, p. 15.

⁶ David Howarth and Jacob Torfing, (eds.), *Discourse Theory in European Politics*, pp. 323-4, see also, James Rogers, 'From 'Civilian Power' to 'Global Power'', pp. 838-9.

⁷ Thomas Diez, *Die EU lesen : diskursive Knotenpunkte in der britischen Europadebatte*, Leske + Budrich, Opladen, 1999, Ch. 2, see also, Thomas Diez, 'Speaking 'Europe'', p. 611.

⁸ Ernesto Laclau, *Emancipation(s)*, Verso, London, 1996, p. 43.

ANALYSIS - POLITICS

With the evident success of the American Apollo programme in the moon landing, it would seem natural for Western European middle powers to join in the Post-Apollo Programme proposed by the Western leading power, the United States, not least because of the substantial cost of space technology. The gist of that financial argument is summed up in the following quotation.

There is no economic case for an independent European launcher. Launchers are the most expensive and least profitable items of space technology. Satellites, on the other hand, are relatively inexpensive and their applications in commercial ventures offer the best prospects of commercial return. The resources available in Europe are, by common agreement, small by comparison with those of the United States, and the Americans have an impregnable lead in launcher technology, while there is good prospect that Europe can compete successfully in satellites. ... a European launcher would still take some years to develop and would offer no advantage over existing American launchers. Its useful life span would be limited by the far more economic American recoverable launch vehicles —the space shuttles.⁹

However, when one looks at the primary sources in parliamentary debates the first nodal point in that discourse is not partnership but competition with the US.¹⁰

Post-Apollo Programme – Competing with the US

Such competition, if it was meant to be serious, necessitated a comprehensive space programme on the European side, from space ports to launchers, satellite technology and even the capability to maintain humans in space. Naturally, both Britain and France wanted to see their technologies used in such comprehensive space programme. However, both also realised that an overarching European programme was the way how such a space programme could be implemented, as can be seen in the following quotation.

(...) I find it difficult to see how Europe as an entity can operate a total space programme without having a total space capability... This means that Europe will not be able to compete on a comparable basis with the United States industry. I do not find it surprising, therefore, that the French and the Germans are now considering a launcher programme. What I do find surprising and disappointing, however, is that our own first stage rocket launcher, Blue Streak, is about to come to the end of its active life after only 11 firings. ...the only space launcher now left in Western Europe is the French Diamant rocket which, I am informed can lift a small satellite of up to 150 kilos. (...) If Europe is determined to have a launcher programme, I wonder whether there is not some way by which the Blue Streak at least might find its way back into that programme and be used again. I believe that the Minister for Aerospace is right in his attempts to create a Eu-

⁹ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 842

¹⁰ See Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 828-9

ropean space agency. Perhaps because space is such a new industry, it is the first that can be set up on a European basis.¹¹

The economic as well as the ideological argument of independent access to space for Europe was stressed in the French Assemblée Nationale.

The Ariane programme would guarantee the technological independence of the country, but nobody would argue that this project will be a scientific advance. It uses technologies which are well known and applied by others. The cost of the launcher is currently 50% higher than the American Thor-Delta and the members of the European agency have not committed to buying it. Do I have to remind you that the Franco-German telecommunication satellite “Symphonie” will be put in orbit by a Thor-Delta launcher?¹²

The French Government, fond of the Ariane project, refuted the economic inferiority of the French launcher.

You said that the Ariane launcher was more expensive than the Thor Delta. Your data is an accurate, because in order to put a geostationary satellite of comparable weight into orbit, that means 750 kilograms as for the Ariane, one needs an Atlas-Centaure not a Thor-Delta launcher and that is 80 million FF more expensive (...). That means that the Ariane is in fact very competitive.¹³

France could proudly present its launcher programme as the most developed in Europe and thus Ariane was seen as the prime candidate for a European launcher programme. This element of a European response to the ensuing space age was indeed an American demand.

Post-Apollo Programme – The US demanding a “European” response

This American demand for a «European response» was used as a political argument in the discourse on the development of a European space programme.

¹¹ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 831-2

¹² M. André Bouloche, ASSEMBLEE NATIONALE — 2^e SEANCE DU 14 NOVEMBRE 1974, 6376II, original : « Ce programme Ariane assurerait l'indépendance technologique du pays, mais personne ne prétend que l'exécution du projet fera « avancer » la science. Il s'agit d'utiliser des technologies déjà connues et expérimentées par d'autres. ...Le prix de ce lanceur est actuellement de 50 p. 100 plus élevé que celui du lanceur américain Thor-Delta, et les membres de l'agence européenne n'ont pris aucun engagement d'achat. Faut-il rappeler que le satellite franco-allemand de télécommunications Symphonie va être mis sur orbite dans moins d'un mois par un Thor-Delta ? »

¹³ M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 3^e SEANCE DU 14 NOVEMBRE 1974, 6400II, original : « Vous m'avez dit que les lancements d'Ariane coûteraient plus cher que ceux de Thor-Delta. Je crois que vos renseignements sont inexacts, car, pour la mise sur orbite géostationnaire de satellites d'un poids comparable à celui dont Ariane aura la capacité, c'est-à-dire environ 750 kilogrammes, ce n'est pas un Thor-Delta actuel qu'il faudrait utiliser, mais un Atlas-Centaure dont le prix est supérieur à 80 millions de francs. ... Donc, je crois pouvoir affirmer que le lanceur Ariane est tout à fait compétitif. »

It seems that no consensus can be reached for arriving at a coherent European [space] programme, because of the hesitation of certain of our partners who seem to prefer to abandon the project of developing a big European launcher as called for by the Americans in order to participate in the Post-Apollo programme.¹⁴

Of course the American demand for a « European response » put the Europeans on the spot and that at a time when European integration was still in the formation process. One could even argue that after rapid integration in the 1950s, the 1960s were marked by roll-back, e.g. in the Luxembourg compromise 1966, and the 1970s, in which the development of a European space policy falls, could be characterised by standstill in integration matters. Thus, European space collaboration would not develop a cumbersome bureaucracy. This tied in well with the Gaullist philosophy of « L'Europe des Nations » and also with the British preference for intergovernmental co-operation. A lean and efficient administration was the preferred mode of operation which would eventually lead to ESA.¹⁵ European autonomy – as can be seen in the following quotation - in space affairs became, nevertheless, important. And that resembled to some extent a « European response » in space affairs as demanded by the Americans.

The Government, following my proposal and that of the Prime Minister, has decided that the essential objective of our space effort must be for Europe to have autonomy in the field of space applications. In telecommunication, navigation services for air and maritime traffic, in meteorology or for defence purposes, we cannot solely rely on the US or the USSR. An exclusively national effort in this field does not make sense. Our choice, therefore, must be a European one. (...) the European Space Agency, which will be the framework for the cooperation [with our European partners] will be a tool of the highest standards in terms of its organisation and structures.¹⁶

The British response to a European space programme, particularly a French-led version which seemed to be the most likely outcome, was lukewarm as can be seen in the vague commitment to a European space conference and the tiny financial contribution, as can be seen in the following quotation.

¹⁴ M. Jean Charbonnel, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4467II, original : « Il nous est en effet apparu qu'aucun consensus ne pourrait s'en dégager pour la poursuite d'un programme européen cohérent, en raison des hésitations de certains de nos partenaires qui semblent préférer renoncer à s'engager sur un programme comportant le développement d'un gros lanceur, pour répondre à l'offre américaine de participation au programme dit Post-Apollo. »

¹⁵ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5372I

¹⁶ M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I, original : « Le Gouvernement, sur ma proposition et sur celle du Premier ministre, a décidé que l'objet essentiel de notre effort spatial devait être de permettre à l'Europe de disposer de son autonomie dans le domaine des applications spatiales. Qu'il s'agisse de télécommunications, de navigation aérienne ou maritime, de météorologie ou des besoins de la défense, il n'était pas possible de s'en remettre totalement aux Etats-Unis ou à l'U. R. S. S. Un effort purement national dans ce domaine n'a pas de sens. Notre choix ne pouvait donc être qu'europpéen. (...) l'agence spatiale européenne, qui sera le cadre de cette coopération, sera, par son organisation et ses structures, un outil d'une qualité incontestable. »

30. Mr. Bishop asked the Secretary of State for Trade and Industry what action he proposes in relation to the post-Apollo programme to preserve United Kingdom supremacy in all large structures projects and to ensure United Kingdom participation in the European Space Club, European Launcher Development Organisation and European Space Research Organisation post-Apollo programmes in the future.

Mr. Michael Heseltine: The Government have decided to take a full part, along with other European nations, in further exploratory work designed to facilitate evaluation by the European Space Conference of its response to the United States offer of participation in the post-Apollo programme. The contribution of the Government to this further work is estimated at £240,000. Much of this money will be spent with British companies. I am not able to comment as to the likely outcome of these researches until they have been completed.¹⁷

The European Space Conference which took place on meeting on 31st July 1973 achieved some concrete results, however. The participants agreed on the development of Spacelab within the American post-Apollo programme with progress in other areas which will be discussed later.¹⁸ Generally, it was accepted that the job would have to be done via European cooperation, by British space industry¹⁹ and by the political establishment²⁰ in Britain and France alike.

These references show an *external* discourse in which both France and Britain see themselves in competition with the US space industry. This impression is supported by the reception of the *external* American discourse demanding a “European” response, not a national one to the American proposal of a post-Apollo programme. Thus this would fall into the concept of Antagonism in Discourse theory which created a “European” response, although a relatively weak one, as predicted by the concept of Antagonism in Discourse Theory.

ANALYSIS – POLICIES/APPLICATIONS

This first incentive for a “European” response under Antagonism was strengthened by the *internal* discourse which went on between France and Britain as to the contents of the space policy and which shone through in place in the previous section. Here both countries tried to hegemonise certain aspects of space policy, as will be shown in the following.

Launchers - general

The acceptance that a viable space programme would have to be a European venture, not a national one, also found its reflection in the development of launchers. The British government

¹⁷ Hansard, 835, 17 APRIL 1972, 29-30

¹⁸ Mr. Michael Heseltine, Weekly Hansard 945, 22 OCTOBER 1973, 693-4

¹⁹ See Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 830

²⁰ See Mr. Onslow, Weekly Hansard 911, 23 OCTOBER 1972, 177

recognised the usefulness of European cooperation, in the development of the L III S launcher, the French abbreviation for third- generation substitution launcher, later named Ariane.²¹

Mr. Michael Heseltine: There has been no change in the British attitude towards the development of a European launcher and the United Kingdom is not a participant in the current L3S project. Nevertheless, in the interests of achieving wider agreement on European space activities, we were bound to recognise the desire of our partners to proceed with a launcher project. Our contribution to this takes the form of payment for the development by British companies of technology and some hardware. The French are to contribute a similar sum to the British led MAROTS [Maritime Orbital Test Satellite]. These negotiations were part of a process that led to agreement to establish a European Space Agency and for Europe to pursue more co-ordinated space policies than hitherto.²²

However, the protection of the national space industry was still a priority, for example in that some MPs advocated sticking to the British space products, such as the outdated Blue Streak launchers.²³ In addition, it was argued that there is no economic case for an independent European launcher.²⁴ Misgivings about French space efforts which would harness European partners for their purposes and drag down British space industry were another, but Britain accepted European space cooperation against the background that the US, acting as European federator, again, would not deal with individual European governments, as outlined above.²⁵ It was also accepted that, if there was to be a European space programme it would need independent access to space in the development of a European launcher. After the dismal end of British Blue Streak rockets, France was the only European country in the possession of launcher capability, in their Diamant rockets.²⁶

France saw itself, once more as the European avant-garde, this time in the development of a space programme.

France has deliberately chose, I can confirm that to the Assemblée and notably to M. Roux, the road of European independence in this field. That is a steep and difficult road, we know that, but it is the only one which has a future and which will provide dignity to our continent. This policy has not changed in the face of disillusionment as we have sometimes encountered it particularly in launcher development. Independent access to space is indeed one precondition for the development of space policy with a network of auton-

²¹ Mr. Michael Heseltine, Hansard, 835, 17 APRIL 1972, 29-30, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I

²² Weekly Hansard 944, 16 OCTOBER 1973, 49

²³ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 831-2

²⁴ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 842

²⁵ Mr. Tarn Dalyell (West Lothian), Weekly Hansard 942, 19 JULY 1973, 825

²⁶ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 831-2

mous telecommunication satellites. In the absence of such a capability, it will be up to the mercy of the great powers whether we can put in place such a network.²⁷

France was really the pioneering nation in launcher development. Well before the Ariane project, France had developed the launcher engines code named Cecles-Eldo and subsequent launcher programmes of Europa II and Europa III, all eventually abortive.²⁸ This was one of the reasons why European partners such as Britain, but also Germany talked about overspend on launcher programmes and eventually quit them, very much to the frustration of France. Against this background, France went into the negotiation on the European space agency to found a comprehensive European space programme, including a big launcher.²⁹ Eventually Ariane became that European launcher which would guarantee independent access to space to Europe.³⁰

Europe has the means, technologies and the know-how necessary for the realisation of its own launchers. We are also aware of the influence France possesses in this field, because of the foresight and the staunch endurance which we have shown in our national space programme. To give up our claim to build a launcher for Europe would not have been just a simple misapprehension of the repercussions of that technology for other applications, but a complete and utter technological and political abdication.³¹

²⁷ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE, 9 NOVEMBRE 1972, p. 4927II, original : « La France a ainsi délibérément choisi, je peux le confirmer à l'Assemblée, et notamment à M. Roux, la voie de l'indépendance européenne dans ce domaine : c'est une voie étroite et difficile, nous le savons bien, mais c'est la seule qui corresponde à l'avenir et à la dignité de notre continent. Cette politique n'a pas changé, en dépit des désillusions qu'elle nous a parfois values, en particulier dans le domaine des lanceurs. La libre disposition d'une capacité de lancement est en effet la condition nécessaire pour le développement d'une politique tendant à la constitution d'un réseau autonome de satellites de télécommunication. Faute de cette capacité, la mise en place de ce dernier serait à la merci des fluctuations politiques des grandes puissances. see also, M. Pierre-Bernard Cousté, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4468I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5371II-5372I, see also, M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I

²⁸ M. Pierre-Bernard Cousté, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4468I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5371II-5372I

²⁹ M. Jean Charbonnel, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4467II

³⁰ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5371II-5372I, see also, M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I

³¹ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5371II-5372I, original : « Or l'Europe dispose des moyens technologiques et des compétences nécessaires à la réalisation de ses propres lanceurs : on sait d'ailleurs de quel poids ont pesé, dans l'élaboration de ce potentiel, la clairvoyance et la ténacité dont nous avons fait preuve sur le plan national. Renoncer à construire des lanceurs aurait été pour l'Europe, non pas une simple erreur d'appréciation sur la portée des applications spatiales, mais une véritable démission technique et politique. »

Thus, under the European Space Research Organisation (ESRO), established in 1964, already, the development of Ariane was started.³²

Ariane

Very much in the vein of discourse theory, Ariane became the hegemonial launcher project leading up to the creation of the European Space Agency. The unsuccessful predecessor programme of Europa launchers had eroded confidence in the French/European launcher programme. Britain and Italy abandoned the project in 1968/9. Germany followed suit in 1972/3. Only France and Belgium stuck with the idea of a European launcher, but the defective partners rejoined the so called substitute launcher programme L IIIS which became Ariane, presented at the European space conference of 20 December 1972. Thus in space, France chose European cooperation, but could rightly claim leadership in technological and political terms.³³ Proportional spending in the French budget shows the importance of individual space projects.

120 million FF for Ariane

9 million FF for a space laboratory

7 million FF for the British maritime navigation satellite Marots.³⁴

Ariane was supposed to deliver independent access to space for Europe, and, of course, France.³⁵ The innovative character of the development of a heavy launcher was however somewhat dubious.³⁶ France could not finance Ariane alone. Therefore, European cooperation for the Ariane project was vital.³⁷

The British Government agreed and was even prepared to contribute funding to the French-led Ariane project, but only in exchange for French funding for the British-led Marots satellite.³⁸

³² M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5372I, see also, M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I

³³ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I

³⁴ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5372I

³⁵ M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 NOVEMBRE 1974, 7101I

³⁶ M. André Bouloche, ASSEMBLEE NATIONALE — 2^e SEANCE DU 14 NOVEMBRE 1974, 6376II

³⁷ M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I

³⁸ Mr. Michael Heseltine, Weekly Hansard 944, 16 OCTOBER 1973, 49

This established once more the precedent of *juste retour*, under which a country receives roughly the same amount of money given to European space organisation back in contracts for their own space industry. Spending issues were consequently the major concern.

Mr. Michael McNair-Wilson asked the Secretary of State for Industry on what the European Space Agency's budget of £185 million is being spent; on what basis Great Britain's contribution has been decided ; which countries are paying as much or more ; and what work is being carried out in the British aerospace industry as a result of our membership of the ESA.

Mr. Kaufmann: About 85 per cent. of the budget of the European Space Agency is devoted to applications programmes covering development and proving of communication satellite system technology, & meteorological satellite, a spacecraft launching vehicle, and a space laboratory to be carried in the United States space shuttle. The remainder is being spent on scientific research in space ; the United Kingdom contribution to this is the responsibility of the Science Research Council. Contributions to the majority of the ESA programmes is on a gross national product basis, although the three most recently adopted applications programmes are being funded according to the national interests of the countries participating in each specific programme. Thus, the United Kingdom does not participate directly in the French-led launcher project and makes only a 6,3 per cent, contribution to the German-led Spacelab programme, but bears just over half of the cost of the maritime communications satellite development. France and Germany are each contributing about twice as much as the United Kingdom to the total ESA budget for 1975.³⁹

Thus there were national vested interests at play, but also a potential for a truly European space industry, not least for launchers.⁴⁰

Kourou (French Guyana)

Kourou, however, seemed to be proof to some British MPs that France was trying to disguise their national space programme as a European one.

The European Space Agency is, in the opinion of some of us, built on foundations, not of rock, but of sand—the sand of French self-centredness. ... They will go on “doing their own thing” with rocket launching in Guyana and other activities.⁴¹

For France, Kourou was the pivot on which the whole space programme was hinging. A European launcher would have to come with a launch site and French Guyana was ideally suited for that purpose, because of its geographical position.⁴² “Thus, we wish to Europeanise the launch site

³⁹ Weekly Hansard 1011, 13 OCTOBER 1975, 563-4

⁴⁰ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 831-2

⁴¹ Mr. Tarn Dalyell (West Lothian), Weekly Hansard 942, 19 JULY 1973, 825

⁴² M. Pierre-Bernard Cousté, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4468I

of Kourou, some trial facilities at Toulouse and our satellite research programme in order to unify the European network in a common framework.”⁴³

Space Lab

The Space Laboratory was another of the early programmes which was led by Germany.⁴⁴ It was developed within the American post-Apollo programme.⁴⁵ It would finally find its application in the Space Shuttles. Here again, the main question was who would pay and for how much.

On Spacelab we took the view that, provided there is general agreement on the ESA framework for Europe’s future space co-operation, we should be prepared to take a share of up to 10 per cent, in the project. Because of the ceiling on our space expenditure, we can take a share only in so far as we are relieved of the cost of our maritime communications satellite by contributions from other member States. On the maritime satellite we have proposed to our European partners that the geostationary satellite which is currently being studied in the United Kingdom industry should be adopted as an experimental maritime communications satellite to meet the recently defined European requirement.⁴⁶

Satellites such as Marots were the most important, because the most lucrative of the space applications. This was not contested between the founding nations of ESA. However, the process of hegemony, as described in discourse theory, can clearly be seen in the contest on which project should receive the most funding.

Satellites

Marots, indeed, became one of the founding projects of ESA.⁴⁷ And the founding nations, including France contributed to the funding of this satellite. This was the trade-off for British support for the French Ariane launcher and the financial contributions of each nation for the other’s project were reciprocal. The same amount that Britain paid into the Ariane programme, France paid into the Marots satellite.⁴⁸ Such deals did not silence misgivings about the logic of the investment.

⁴³ M. Michel d’Ornano, ministre de l’industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I, original : « Ainsi, nous souhaitons européeniser la base de lancement de Kourou, certains moyens d’essais lourds de Toulouse et notre réseau de poursuite de satellites, dans le cadre d’une unification du réseau européen. »

⁴⁴ Mr. Kaufmann, Weekly Hansard 1011, 13 OCTOBER 1975, 563-4

⁴⁵ Mr. Michael Heseltine, Weekly Hansard 945, 22 OCTOBER 1973, 693-4

⁴⁶ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 839

⁴⁷ Mr. Michael Heseltine, Weekly Hansard 945, 22 OCTOBER 1973, 693-4

⁴⁸ Mr. Michael Heseltine, Weekly Hansard 944, 16 OCTOBER 1973, 49

There is no economic case for an independent European launcher. Launchers are the most expensive and least profitable items of space technology. Satellites, on the other hand, are relatively inexpensive and their applications in commercial ventures offers the best prospects of commercial return. The resources available in Europe are, by common agreement, small by comparison with those of the United States, and the Americans have an impregnable lead in launcher technology, while there is good prospect that Europe can compete successfully in satellites. ... a European launcher would still take some years to develop and would offer no advantage over existing American launchers. Its useful life span would be limited by the far more economic American recoverable launch vehicles —the space shuttles.⁴⁹

The European Space Research Organisation had developed a number of satellites, e.g. Meteosat for meteorology, a European telecommunications satellite and a navigation satellite for air traffic.⁵⁰ The problem in the period before ESA was that most of these European satellites, e.g. the Franco German telecommunication satellite Symphony would be put into orbit either by American or Soviet launchers. This might not seem as such a big problem for civil application, but once power considerations come into play, antagonistic rationales versus the other major powers were used, which finally leads to the French claim for independent access to space for Europe.⁵¹

This section has shown the discourse on the preeminent technologies, installations or innovations which both France and Britain contested. Under the concept of Hegemony in Discourse theory it is this ongoing contest which will lead the participating actors to common conclusion, i.e. European politics. In most fields French solutions prevailed, but participation in the discourse kept Britain onboard sharing the the final outcome to a considerable extent in the commitment to ESA.

ANALYSIS – POLITY/ORGANISATIONS

However, this was not an easy process. There were a number of predecessor organisations to ESA which acted as steps towards a European solution, but fell by the wayside in that process. It is nevertheless important to understand the rational for their creation in order to get a better understanding of the process which led to the creation of ESA.

European Space Research Organisation (ESRO)

⁴⁹ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 842

⁵⁰ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5372I

⁵¹ M. André Boulloche, ASSEMBLEE NATIONALE — 2^e SEANCE DU 14 NOVEMBRE 1974, 6376II, see also, M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 NOVEMBRE 1974, 7101I

Established in 1964, the ESRO was one of the first attempts to bring the diverse and often overlapping European space programmes under a common umbrella. Such national space programmes were finally grouped under three main branches of satellite development, i.e. telecommunication, navigation control of air traffic and meteorology. France was the lead nation in this organisation with a clear agenda of Europeanization of space assets across Europe.⁵² Britain and its space industry followed that desire.

However, those I have spoken to in our industry generally give the concept of the ESA a welcome, even if it be a qualified one. They see it as absorbing the work being done by ESRO. ... but I believe they wonder to what extent the ESA will be given powers to have a firm direction over Europe's space activities and thus to be cost effective. Certainly they see that nothing is to be lost by co-operating with the agency as regards informing it of national projects. They also think that the co-ordination of programmes within Europe is to be welcomed.⁵³

The hope was that duplication of space research could be avoided across Europe without overbearing bureaucracy in ESA.⁵⁴ Technological development seemed to warrant hope for growth in the space industry, because particularly in the satellite programmes under ESRO saw maturation in the early 1970s in a shift from using satellites for scientific observation to using them for commercial services in communications and application. This shift toward a commercialisation of space applications held great hope that the industrial significance of space activities would increase further.⁵⁵ In commercialisation and in the avoidance of duplication we can also see the hegemoisation of nodal points, i.e. filling such empty signifiers with space contents.

European Launcher Development Organisation (ELDO)

The ELDO was also a predecessor organisation of ESA, founded in 1962, was charged with the development of a European launcher. Its history was mare with failures of the Europa rockets, based on the "Cecles-Eldo engines".⁵⁶ Overspending and successive failures of these launchers led to the demise of ELDO in 1973.⁵⁷ For the short period until the foundation of the European space agency in 1975, the ESRO took over the task, administration and facilities of the ELDO.

⁵² M. Jean Charbonnel, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4467II

⁵³ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 830

⁵⁴ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 840

⁵⁵ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 836

⁵⁶ See M. Jean Charbonnel, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4467II

⁵⁷ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 831-2, see also, M. Pierre-Bernard Cousté, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4468I

Particularly during this early period of space endeavours, the nationalist take can still be felt quite strongly. A European spirit of collaboration in space technologies still had to develop.

Mr. Bishop asked the Secretary of State for Trade and Industry what action he proposes in relation to the post-Apollo programme to preserve United Kingdom supremacy in all large structures projects and to ensure United Kingdom participation in the European Space Club, European Launcher Development Organisation and European Space Research Organisation post-Apollo programmes in the future.⁵⁸

European collaboration aspects were however developing. The forum where such ideas found the right environment was the European space conference on 20 December 1972 and another one on 31 July 1973 which shows the urgency, perhaps the importance of space affairs at the time.⁵⁹ The ELDO was by that time already burnt out, with Italy withdrawing from the organisations early as 1969 and the main contributors, France, Germany and Britain in negotiations about its future.⁶⁰ The European space conference brought the presentation of a new launcher programme, under several names, i.e. L III S, substitute launcher for the European programme, or finally then the Ariane launcher. And the conference brought the agreement to establish the European space agency which would encompass the activities of ELDO and ESRO.

After the uncertainties and the hesitations during 1972, the successive failures of the last launches of the Europa II rocket; and after difficult and painful decisions in the abandoning of the Europa III programme and then the Europa II; after long and difficult negotiations, we were able, I dare say objectively, to save the European space endeavour. We were able to finally give Europe a comprehensive space programme, coherent and balanced. I deliberately say Europe, because in this field our policy is uncompromisingly open to international cooperation and naturally we give preference to such cooperation with our European partners.⁶¹

This led the way to the establishment of ESA which can be seen as the outcome of the hegemonisation process going on in the field of European space organisation between European nations.

European Space Agency (ESA) – a civilian organisation

⁵⁸ Hansard, 835, 17 APRIL 1972, 29-30

⁵⁹ The Prime Minister (Mr. Edward Heath), Weekly Hansard, 905, JULY 1972, 1399

⁶⁰ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I

⁶¹ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5371II-5372I, original : « Après les incertitudes et les hésitations de l'année 1972 consécutives à l'échec du dernier lancement de la fusée Europa II, après les décisions difficiles — et douloureuses — : d'abandon des programmes de lanceurs Europa III, puis Europa II, après de longues et difficiles négociations, nous avons pu, j'ose le dire en toute objectivité, sauver l'Europe spatiale ; nous avons pu, enfin, doter l'Europe d'un programme spatial complet, cohérent, équilibré. Je dis bien l'Europe, car, en ce domaine, notre politique est résolument ouverte à la coopération internationale et, tout naturellement, cette coopération s'exerce de préférence avec nos partenaires européens. »

European integration of the early 1970s was no longer the idealistic integration process of the 1950s where Jean Monnet advocated the United States of Europe.⁶² In the structure of ESA one can see the changed spirit brought about in France by the 5th Republic and Charles de Gaulle's idea of the Europe of nations. ESA was designed as an intergovernmental institution with no political ambitions. It was meant to be an effective executive agency of the European space programmes, avoiding duplication between them.⁶³ The administration was meant to stay very small in order to avoid overspending, but also to prevent the development of authority independent of the member states, as can be seen in the following quotation.

Turning now to the European Space Agency concept, the point made by the hon. Gentleman that one could have a proliferation of bureaucracy is right. Certainly, we do not want to set up an agency which would grow—I think it is called Parkinson's Law—without there necessarily being anything for it to do.⁶⁴

Importantly, ESA was also designed as an exclusively civilian organisation.⁶⁵ The European Space Conference meeting of 31 July 1973 agreed to the establishment of a European Space Agency and it agreed measures for the future harmonisation of national and European space programmes. At this point, ESA was meant to come into operation on 1 April 1974.⁶⁶ It took finally until May 1975 for the signature of the member states under the convention and until October 1980 for the ratification of that treaty. This long period of negotiations between the member states for arriving at a treaty. Nationalist positions were still commonplace and were naturally put forward.⁶⁷ Bargaining also took place within the member states in order to arrive at a majority for the treaty. Both processes can be seen as the hegemonization process within Europe and within the respective member states which led to the development of a European position on space affairs, albeit not a political one, because that was explicitly not the role of ESA. Despite the fact that ESA was called the *European* space agency, this section has shown that there were hard national interests at play.

CONCLUSION

The primary sources on France and Britain showed that both countries agreed on the foundation of ESA. That does however not mean that national interests disappeared. National interests re-

⁶² J. Monnet, *Mémoires*, Fayard, Paris, 1976

⁶³ M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5372I, see also, M. Michel d'Ornano, ministre de l'industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I, see also, Mr. Michael Heseltine, Weekly Hansard 945, 22 OCTOBER 1973, 693-4

⁶⁴ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 829

⁶⁵ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 831

⁶⁶ Mr. Michael Heseltine, Weekly Hansard 945, 22 OCTOBER 1973, 693-4

⁶⁷ See, Mr. Tarn Dalyell (West Lothian), Weekly Hansard 942, 19 JULY 1973, 825

mained and they became again nodal points in the overall discourse on the development of a European space policy. This sounds almost a bit to integrationist, because it can well be argued that the sharing of the discourse did not take place everywhere. For Britain the main concern remained the “Budget”; for France the main concern remained “Independence”, as will be shown in this conclusion. However, both find a common denominator in the development of a viable European space industry. It may well be argued in defence of the theoretical approach used in this paper that this happened because of the participation in a shared discourse.

Britain's main concern: The Budget

A good insight into British thinking at the time gives the following quotation, which starts out on the idealistic point that there should be a European space programme, but then turns to real interests in the British space industry and British funding that would have to go into ESA.

What I think my hon. Friend the Minister [Member for Tavistock (Mr. Michael Heseltine)] is rightly trying to do is to make Western European countries think in European rather in national terms. As we are such a new member of the EEC, it is heartening to see the younger Ministers pushing forward with a concept of European agencies rather than struggling on with national concepts that do not, and cannot measure up to these of our competitors, in particular our North American competitors. ... It is not unreasonable to suppose that ... we could leapfrog from a national space agency and go straight to a European Space Agency. ... there is some way to go before a European Space Agency gets off the ground ... should [we] not consider again the Select Committee's recommendation that a national space agency bears serious consideration. ... In other words, Britain may have a number of separate projects in hand, but she has no overall space programme as such. As we are spending more than £30 million a year on space, one may wonder whether we are getting value for money.⁶⁸

Budget concerns are the main reference (nodal point) in the British debate on a European space programme. However, it was also a moment of creation. Serious questions about the philosophy of the new European space agency were asked.

Equally, this is a moment to consider what we think the European Space Agency should be about and what should be its terms of reference. Do we accept the concept that all European civil space projects should be handled or coordinated by a single agency; and do we think that member countries should commit their entire civil space budgets to it? That seems a fairly tall order. If, perhaps, we question whether that is how it should operate, do we think that nations should contribute on a GNP-related block sum basis, or do we think that they should make pro rata contributions only to those programmes in which they are involved? I

⁶⁸ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 828-9

gather that the general European view is that individual nations should receive back at least 70 per cent of any contributions they make in contracts placed by the agency.⁶⁹

And finally the argument, again, turns towards the budget and how it should be organised. The key procedural question in this respect was whether the ESA budget should be made up of fixed contributions based on the GDP (above still GNP) of a country, or whether they may only pay for the programmes they were interested in – often called an à-la carte approach.⁷⁰ This question was settled, in the more general question on the ESA budget and the British contribution to it.

Mr. Michael McNair-Wilson asked the Secretary of State for Industry on what the European Space Agency's budget of £185 million is being spent; on what basis Great Britain's contribution has been decided; which countries are paying as much or more; and what work is being carried out in the British aerospace industry as a result of our membership of the ESA.

Mr. Kaufmann: About 85 per cent. of the budget of the European Space Agency is devoted to applications programmes covering development and proving of communication satellite system technology, meteorological satellite, a spacecraft launching vehicle, and a space laboratory to be carried in the United States space shuttle. The remainder is being spent on scientific research in space; the United Kingdom contribution to this is the responsibility of the Science Research Council. Contributions to the majority of the ESA programmes is on a gross national product basis, although the three most recently adopted applications programmes are being funded according to the national interests of the countries participating in each specific programme.⁷¹

Thus Britain achieved budgetary flexibility in ESA, a funding of British space projects roughly equal to what Britain paid into ESA and therefore a financial contribution which was not unduly taxing on the British budget

France's main concern: Independence

The main French concern was independence, mainly in political terms, but also in terms of developing a space industry which would be complete in cutting-edge technologies.

France has thus deliberately chosen – I can confirm this to the Assemblée [Nationale] (...) the road to European independence in this field [space]. This is a steep and difficult road, we know that well, but it is the only one which has a future and corresponds to the dignity of our continent.⁷²

⁶⁹ Mr. Michael McNair-Wilson (Walthamstow, East), Weekly Hansard 942, 19 JULY 1973, 830

⁷⁰ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 840

⁷¹ Weekly Hansard 1011, 13 OCTOBER 1975, 563-4

⁷² M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE, 9 NOVEMBRE 1972, p. 4927II, original : « La France a ainsi délibérément choisi, je peux le confirmer à l'Assemblée, et notamment à M. Roux, la voie de l'indépendance européenne dans ce domaine : c'est une voie étroite et difficile,

The development of a European launcher programme, first in the Europa rockets, later supplemented by the Ariane rocket coincided with this argument of European independence in that such launchers would give Europe independent access to space, which was vital for its political independence to conduct its space aspirations freely.⁷³ The problem was that ‘European’ was still a very risky term to use in space affairs, because effectively the Treaties of Rome foresaw no competences for European institutions in this field and thus it remained up to the will of the member states to cooperate, or not.⁷⁴ As much as ESA was chosen as an intergovernmental organisation, this relatively unstable arrangement is the consequent Achilles heels of the organisation. One may see this as a shortcoming resulting from the political will, not least of France, at the time. Independence in the space sector as France’s main objective has however been achieved.⁷⁵

The common denominator: A European space industry

This can be seen in the existence of a European space industry, still based on national interest, because such companies are inevitably located in the member states. They are internationally competitive, as was the original objective⁷⁶, not least because of European cooperation which goes as far as what one could call European companies, such as Arianespace, founded in 1980. The French claim for independence was thus just as much a claim for political independence as for technological independence which would be embodied in a European space industry which could produce satellites, launchers and technology for research, such as in the space lab.⁷⁷ British commitment to participate in such an endeavour was also forthcoming.⁷⁸

We are in the EEC. If we have to accept this kind of marriage, it is not good enough for the United Kingdom not to take a lead in these important matters. ... Many people will not be able to see the relevance of putting men on the moon. But in this matter we are not concerned with such ambitious enterprises. However, there is an enormous spin-off of high technology from post-Apollo projects and the Government and

nous le savons bien, mais c’est la seule qui corresponde à l’avenir et à la dignité de notre continent. » , see also, M. Jean Charbonnel, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4467II

⁷³ M. Pierre-Bernard Cousté, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 OCTOBRE 1972, p. 4468I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1299I-II, 1300I, see also, M. Jean Charbonnel, ministre du développement industriel et scientifique, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 8 NOVEMBRE 1973, 5371II-5372I

⁷⁴ M. Pierre-Bernard Cousté, ASSEMBLEE NATIONALE — SEANCE DU 16 MAI 1973, 1300I

⁷⁵ See M. Michel d’Ornano, ministre de l’industrie et de la recherche, ASSEMBLEE NATIONALE — 2^e SEANCE DU 27 NOVEMBRE 1974, 7101I, see also, M. Michel d’Ornano, ministre de l’industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I

⁷⁶ M. Michel d’Ornano, ministre de l’industrie et de la recherche, ASSEMBLEE NATIONALE — 3^e SEANCE DU 14 NOVEMBRE 1974, 6400II

⁷⁷ M. Michel d’Ornano, ministre de l’industrie et de la recherche, ASSEMBLEE NATIONALE — 1^{re} SEANCE DU 14 NOVEMBRE 1974, 6364I

⁷⁸ Mr. Michael Heseltine, Hansard,, 835, 17 APRIL 1972, 29-30

the industry must spell out the benefits of space participation in terms of medicine, biology, counter-pollution measures, meteorology, weather forecasting, telecommunications, crop control and many other aspects which will help not only the developed, but the under-developed, countries. This is a job for the Government and industry.⁷⁹

And the progress European space efforts had made since the inception of the early space organisation ESRO and ELDO. The shift from science to applications made the commercialisation of space services possible and held the prospect of a growing space industry in Europe.⁸⁰ Both, France and Britain wanted their fair share out of this growing sector. In the principle of *juste retour* one can discern the safeguard that France and Britain put into the ESA convention that their tax payers money would be returned in due course through the development of their home-grown space industry.

It can be concluded that European space policies moved, initially, from disorganised national space policies to ad-hoc space collaboration between nations as can be seen in the ESRO and the ELDO. This was quickly recognised as an unsatisfactory development which did not produce the desired results. Therefore ten European states⁸¹ eventually agreed to the creation of the European Space Agency (ESA) in 1975, to cooperate in the field of space, a membership which has now expanded to 17, plus Canada.⁸² Space policies became more coordinated, as a result, but the organisation remains an intergovernmental organisation in accordance with the will of its members. There are some integration aspects, such as the GDP contributions to the ESA budget rather than an exclusively *à la carte* financial contribution which was originally discussed. However, the hopes that ESA might develop into another supranational institution was dashed. For the supporters, supranational institutions were the ones driving the European integration process forward and in novel fields, such as nuclear or space they were seen as particularly suited, because of the absence of vested interests.⁸³ It became clear relatively quickly that space was not entirely new, because of its strong connections and indeed its origins in the aerospace and defence sectors. However, this novelty also rang partly true as can be seen in the agreement between France and Britain to foster a European space industry. It helped establish a more natural collaboration between the respective national space industries than would have been possible in the defence

⁷⁹ Mr. E. S. Bishop (Newark), Weekly Hansard 942, 19 JULY 1973, 834

⁸⁰ The Under-Secretary of State for Trade and Industry (Mr. Cranley Onslow), Weekly Hansard 942, 19 JULY 1973, 836

⁸¹ Belgium, Denmark, France, Germany, Italy, the Netherlands, Spain, Sweden, Switzerland and the UK were the founding members of ESA.

⁸² Austria, Finland, Greece, Ireland, Luxembourg, Norway, and Portugal joined later. Since 1 January 1979, Canada has the special status of ESA 'cooperating state'.

⁸³ See Hugo J. Hahn, 'Euratom: The conception of an international personality' *Harvard Law Review* 71(6) April, 1958, p. 1002, see also Pierre Gerbet, *La Construction de l'Europe*, 3rd ed., Imprimerie Nationale Éditions, Paris, 1999, p. 173.

sector, for example, where secrecy and vested interests prevail until today, a recent example being the abortive merger between EADS and BAE.

This paper has thus shown the potential of the space sector for European integration, which eventually lead to foundation of the European Space Agency (ESA), because the nation states could not provide for a viable national space policy by themselves and that this was the rationale which pushed them for a European solution, albeit not a political one and certainly not a supra-national one. ESA was deliberately left apolitical and intergovernmental, which might however have to change, in the future, if space policy takes a more prominent role beyond its technical aspects. This would require political legitimacy - a rationale which can be seen in the current political debate on the relationship between ESA and the EU.⁸⁴

⁸⁴ See Carl Bildt and Jean Peyrelevade, *Towards a Space Agency for the European Union*, ESA Publications Division, Paris, 2000, see also, Peter Creola, 'Some comments on the ESA/EU space strategy', in: *Space Policy*, 17 (2001), see also, Frans von der Dunk, 'Towards one captain on the European spaceship – why the EU should join ESA', in: *Space Policy*, 19 (2003), see also, Stephan Hobe, 'Prospects for a European space administration', in: *Space Policy*, 20 (2004), see also, Günter Verheugen, 'Europe's space plans and opportunities for cooperation', *Space Policy*, 21 (2005), see also, Alain Gaubert, André Lebeau, 'Reforming European space governance', in: *Space Policy*, 25 (2009), see also, Nicolas Peter, Katharina Stoffl, 'Global space exploration 2025: Europe's perspectives for partnerships', *Space Policy*, 25 (2009), see also, Thomas Hoerber, 'The European Space Agency (ESA) and the European Union (EU) – The next step on the road to the stars', in: *Journal of Contemporary European Research (JCER)*, Vol. 5, No. 3 (2009)