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# Supporting Atlas: Franco-British Co-operation to Service Europe's Military Airlifter

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**Abstract:** European defence policy clearly remains heavily dependent upon the equipment of the French and British armed forces. What remains largely unknown, however, is the extent of co-operation between these forces to maintain this equipment and thereby transform theoretical capacity into actual military capability. Drawn from a study of such bilateral co-operation over servicing the Atlas (A400M) airlifter, this article shows that modest levels of co-operation have developed but also that deeper collaboration continues to be blocked by unfavourable organisational and political structures. The first level of differentiation concerns contracting with the aircraft's manufacturer (Airbus): the British have delegated nearly all support activity to this firm, whereas the French have retained most of it 'in-house'. Secondly, the two countries' defence industrial policies continue to differ significantly. In the British case, defence industrial base concerns are now addressed on a bespoke basis centred upon market conditions in general, and competitiveness of supply in particular. Conversely, neo-*dirigiste* interventionist industrial policy still dominates French equipment support. Weak bilateral co-operation over supporting the Atlas is therefore best explained by using constructivist political economy to unpack the problem definitions and policy instruments it has entailed, together with the national hybrids it has bolstered.

**Keywords:** A400M – contracting - defence equipment support – industrial policy

## Introduction

The Atlas transport aircraft – often called the A400M – was designed to provide European air forces with a capacity for tactical airlift to short, often remote airfields. Beginning in the 1980s, over the course of its development this aircraft has generated considerable, mostly negative, press coverage because of delivery delays, certain technical failings and massive cost over-runs (see Box 1). Nevertheless, a significant tranche of the aircraft has now been delivered to the French air force (currently 15 based near Orléans) and the UK's RAF (20 based at Brize Norton). But this example

of European scale defence procurement has also attracted attention, and even some academic research, for other deeper reasons.

Firstly, the self-proclaimed 'commercial approach' ostensibly used to design, build and pay for this aircraft programme multilaterally has given rise to analysis and comment (Joana & Smith, 2006).<sup>1</sup> Procuring this aircraft has therefore been presented as having entailed considerable shifts in national procurement practices and the emergence of a 'depoliticised' and 'denationalised' European alternative (Mawdsley, 2013: 15).

Secondly, it has been argued that by autonomising key industrialists from their respective states, the very creation in 2000 of European Aeronautic Defence and Space (EADS- the result of a merger of national companies in 2000 and now an integral part of Airbus), was a crucial precondition for this programme actually being realised (Faure, 2016: 232).

As a political product, the Atlas programme therefore provides a means of assessing the degree and durability of integration of Europe's defence industrial base. Analysis of the political work to which it has been subject highlights the policy arrangement around which the aircraft itself has functioned as a 'boundary object' (Star & Griesemer, 1989) that has mobilised various actors over *ad hoc* collaboration on a specific project. But what has happened since then to this example of international integration? Have the arrangements, the instruments and the organisations that support them which were put in place to produce the Atlas remained valid for its maintenance and management? Or has this long-term commitment entailed the establishment of another institutional structure? In other words, have the collaborative conventions developed for the production of the aircraft survived the test of managing its existence in the medium and long-term, or has this management necessitated a new institutional structure?

Analysing data on this question of military capability in general, and that pertaining to the 'through life support' of defence equipment in particular, is precisely what this article sets out to do. Drawing upon recent research into how France and Britain's military capabilities have evolved since the 1980s,<sup>2</sup> our central question concerns the rules, norms and practices which have structured 'in-service' equipment support, together with the sets of actors who have engaged in changing or reproducing them. What room has been developed for multilateral, 'minilateral' (see Faure this issue) or even bilateral co-operation over support? More precisely, our focus here will be narrowed to the Franco-British programme of co-operation established in 2014 in order to mutually service and support the Atlases of both countries. As will be highlighted below, the enigma to be addressed is why, despite the ambitious high-level commitments made on both sides of the Channel, actual Franco-British co-operation over in-service support has turned out to be remarkably low? In short, why has differentiation, and even divergence, between the two national approaches been the outcome?

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1 At least in theory, this approach featured a shift from a logic of arithmetically-based *juste retour* to one where a 'balance' of workshare at the level of the programme as a whole was to be achieved, the designation of Airbus as a primary contractor free to choose and manage its sub-contractors and the positioning of OCCAR as an intermediary between Airbus and national procurement systems.

2 This research has included in-depth analysis of official documentation, ministerial speeches and the business models of the manufacturing and servicing firms involved, together with 30 interviews with relevant politicians, civil servants, air force officials and managers of Airbus.

Our response to this question is two-fold. Firstly, to support the Atlas each defence ministry has contracted quite differently with Airbus: the British delegating nearly all this activity to this firm whereas the French have retained most of it 'in-house'. Secondly, the most fundamental reason why this contracting has diverged is that the two countries' defence industrial policies continue to differ significantly. In the British case, this is not however because all procurement in that country has simply been 'liberalised'. Quite the contrary: defence industrial base concerns are now addressed on a bespoke basis centred upon market conditions in general, and analysis of the competitiveness of supply in particular (Giry & Smith, 2019). Conversely, neo-*dirigiste* interventionist industrial policy still dominates French equipment support. If the Presidency and government of Emmanuel Macron have certainly sought to open up parts of the Defence industry in France, the close relationship between representatives of the state, managerial elites in large national defence companies and the *Armée de l'air* continues to restrict how contracts over in-service support are written and implemented (Ansaloni & Smith, 2018).

More generally, by analysing why this example of bilateral co-operation was put in place and, above all, the modest effects it has so far had on supporting the Atlas in both France and the UK, our underlying aim is to assess and explain the structural differences which can obstruct then differentiate even this type of bilateral European cooperation and its 'transversal' character (featuring agreements and shared work by actors beyond state those of states: Faure & Lebrou, 2019). Accordingly, elucidating why Franco-British co-operation over servicing the Atlas has ultimately been so minimal first necessitates a brief excursion into the political economy of defence equipment support. From there, section 2 then sets out the way Atlases have been supported in both countries, before tackling its explanation in section 3.

**Box 1: A European aircraft developed over 30 years**

1980s: Initial proposals began when a need was perceived to replace ageing transport aircraft in the UK (the Hercules C130) and France and Germany (the Transall C160).

1996: First requirement firmed up in 1996, together with a commitment to buy the aircraft using a new 'commercial approach'

2000/1: Official commitments by national governments to buy the aircraft (225 aircraft, of which 50 by France, 25 by the UK), but Italy pulls out.

2003: Decision made to equip it with a new, European-made motor (the TP 400)

2005-2013: Big delays due to problems with fuselage strength and the engine's gear box

2013: First aircraft delivered to national air forces

2014: Franco-British agreement to cooperate over in-service support

2015: Further bilateral agreement over the pooling of spares

2015: crash of an aircraft in Seville causing four deaths and two serious injuries

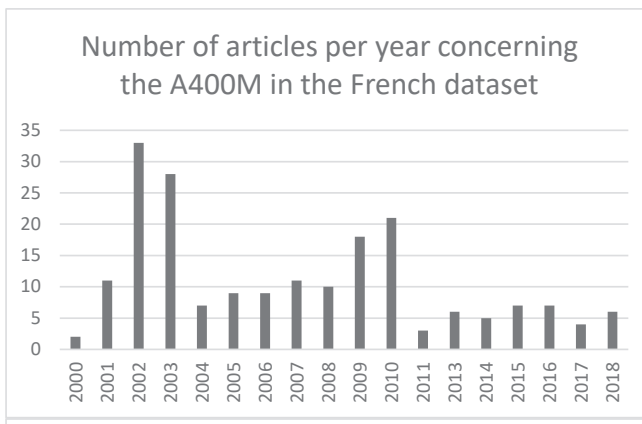
2017: Massive cost over-runs announced (€7bn)

## A Constructivist Political Economy of 'In-service Support': More than Just States vs. Markets

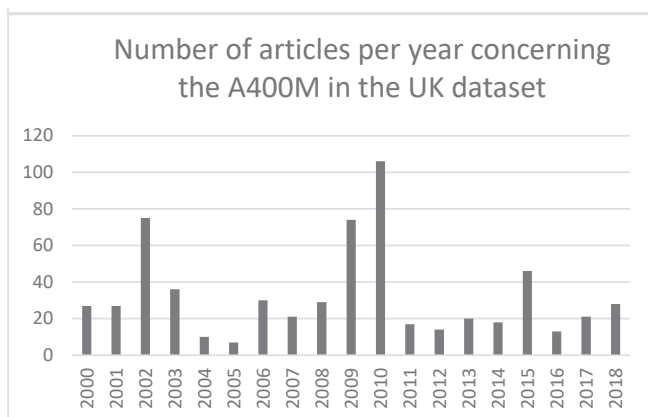
Although accounting for between 10 and 20% of most national defence budgets,<sup>3</sup> in-service equipment support is the forgotten element of defence spending for most stakeholders, journalists (see Box 2) and virtually all specialist academics. As one of our interviewees put it, 'support has traditionally been the Cinderella, the second fiddle, it's less glamorous than actually buying weapons and equipment'.<sup>4</sup> Or, as Lynn ironised, 'what is dramatic easily displaces what is merely important' (1993: 4). If one examines the French or the British defence budgets, however, one soon realises how important it is for research to pay in-service support more attention both in terms of what this category entails for the military and the public purse, as well as for the politics of this economic activity.

### **Box 2: Newspaper coverage of support for the Atlas\***

An analysis of journalistic production on the A400M shows that - even if the corpus is larger in the United Kingdom than in France - variations in journalistic attention on this subject are structured in the same way. A first peak, observable in 2001 and 2003, covers the contractualisation process. A second, between 2009 and 2010, covers the first reports of the programme's perceived failures.



- 3 In 2016-2017, the UK spent £6.7 billion on « Equipment Support », i.e. 19 % of its defence budget. Meanwhile, in 2017 'l'Entretien Programmé des Matériels' cost around 10 % (3.4 billion euros) of the French defence budget. It is nevertheless difficult to compare these two figures as they reflect quite different units and methods of accounting.
- 4 Interview, Official from the interest group *Aerospace, Defence, Security and Space* (ADS), London, February, 2018. This citation from a French official underlines a concrete manifestation of this 'Cinderella' status: 'Servicing budgets are the first to get hit by budgetary cuts. And that's because it's more fun to buy new equipment, maybe its easier too...in any cases it's harder to reduce equipment number and easier to cut the purchasing of spare parts, renovations and maintenance' (Interview, ex. *cabinet* member of the former Minister of Defence, J-Y Le Drian, Paris, September 2016).



There is little mention of maintenance (10 occurrences for the French dataset; 49 occurrences of “maintenance” for the English one and 16 of “repair”), but the issue is most often brought up by political authorities (e.g.: ‘Le Sénat préconise l’adoption d’une feuille de route par le conseil de défense, afin de mutualiser plusieurs capacités critiques : le ravitaillement en vol, la maintenance de l’A400M’; Le Figaro, 4 July 2013) and much less frequently by manufacturers (who used it as an argument, in the early 2000s, to compete with the ageing Antonov 70, whose reliability in terms of maintenance was stigmatised).

In both cases, the content of this journalism is structured in the same way: lexicometric analysis reveals a first class of terms related to defence and political and strategic choices. A second class concerns the A400M as such, its technical characteristics and its commercial trajectory (delays, technical errors, etc.). Finally, a third class is linked to the economic life of the actors involved in the aircraft industry. Thus, our lexicometric analysis outlines the common journalistic framework that has been applied to both countries.

\* This database was built from that of Factiva by retaining 4 French referenced newspapers (Le Figaro, Le Monde, Libération, L’humanité) and 5 British newspapers (The Times, The Guardian, The Sunday Times, The Daily Telegraph, The Independent) based on a search for the word A400M in title or in the body of the text of journal articles between 2000 and 2018. The French database contains 197 texts and the British one 652. The data was processed under R, using the R. Temis package (Bouchet-Valat & Bastin, 2013) and the Iramuteq software (Ratinaud, 2009)

From the first angle, in-service support encompasses not only the maintaining of equipment such as the Atlas aircraft (thus servicing *per se*), but also the purchasing, storing and transportation of goods which range from cheap nuts and bolts to highly expensive items such as motors or wings. In the US, a report by the General Office of Accounting (GAO) estimates that the cost of operating and support can amount to

70% of the procurement and possession costs of a weapon system (GAO, 2003: 19), and equivalent figures exist in the UK (Ministry of Defence, 2006: 35). Meanwhile the French national audit office has declared that if in-service support can constitute between 30 and 50% of ‘possession costs’ of all military equipment, this figure can be as high as 60% for military aircraft (*Cour des comptes*, 2013: 25). Moreover, since much defence equipment has to last more than twenty years, during which time it usually undergoes a series of revisions and updates, this activity also has to be planned and budgeted for. Indeed, since the 1960s, concepts such as ‘through-life costing’ have been developed in order to structure the way the military, defence bureaucracies and their ‘partners’ in private industry think about, and act around, the issue of in-service support, i.e. how they manage the ‘capital’ of the armed forces (Giry, 2020).

Indeed, supporting defence equipment is frequently a highly political activity precisely because its organisation and orientation involves a plethora of choices that are deeply structured by institutions and asymmetrical power relations. In terms of such choices, each national defence configuration has first to decide for each ‘weapons system’ just what will be maintained ‘in house’ by armed forces personnel and what will be contracted out to either the manufacturer of the equipment in question or to other firms. From there other decisions must be made about what length and type of contact will be made with each service provider (e.g. are these firms to operate in combat zones or not?). Moreover, in some instances, as we will examine in the following sections, decisions may be made to co-operate over support with foreign defence configurations who possess the same equipment. In short, decisions over in-service support are constantly being made for each weapon system. What is crucial to grasp, however, is that none of these decisions simply flow seamlessly from the functional ‘nature’ of the issue. Rather their very definition as a ‘problem’ for the military, and thus for public authority (Gusfield, 1981; Rochefort & Cobb, 1994), is shaped by the perceptions and preferences of dominant stakeholders.

Moreover, these problem definitions do not arise from processes that are without parameters and limits. As within all public policy-making, the constructions of ‘reality’ within the defence field which affect decision-making are structured by institutions, i.e. by stabilised norms, rules and conventions (Nee, 2005). Condensed in established procedures and patterns of behaviour, these institutions tend strongly to ‘regularise’ the way through which in-service support is thought about and enacted through instruments of public, as well as inter and intra-firm, policy. Indeed, institutions also participate strongly in mediating the effects of the unequal sets of resources and power held by each of the organisational stakeholders in any national defence configuration. A short overview of the British and French approaches to in-service support, together with the tensions to which each has recently given rise, illustrates what this ‘constructivist institutionalist’ political economy (Hay, 2016) enables and guides empirical research to focus upon.

In the British case, a wave of privatisations conducted in the 1980s first stripped the armed forces of much of their capacity to service their equipment in-house. Continuing until the present day, this change has been overseen since 2007 by the creation with the Ministry of Defence of the Defence Equipment and Support Agency (DE & S). Specifically, staff within the latter are charged with managing the through life support of each weapons system in conjunction with the relevant Armed Force. Because most of this support is outsourced to private contractors, in practice



its political economy is almost invariably centred upon the relationship between the DE & S, the relevant firms, but also the Treasury (and sometimes the Department of Business). Individual military actors are involved (notably through secondments to DE & S itself), but as organisations the armed forces usually find themselves distanced from actual contracting negotiations (Giry & Smith, 2019).

In the case of France, in-service support differs firstly because more in-house capacity has been retained than in the UK (both within each armed force and through the state-owned company, the SIAé: *Service industriel de l'aéronautique*) and, secondly, because this activity has recently been formalised in the form of a policy concept: le *Maintien en Condition opérationnelle* (MCO). The institutionalisation of this policy concept has modified the way weapon systems are now managed, in particularly by guiding actors to take into account the possession costs of equipment more systematically. In turn, this has changed accounting practices, even if it is still difficult to calculate the actual cost of MCO in France using the Ministry of Defence's accounts (Droff, 2013: 242). Indeed, this change has also been influenced in part by practices observed in other countries, notably the UK.<sup>5</sup>

Indeed, over the last few months the current French President and government have introduced organisational changes and announced further moves which seem likely to shift the institutional ordering of in-service support in their country further towards a model that accepts greater externalisation, without however totally abandoning 'in-house' personnel and a logic of action designed to ensure that as much 'workshare' as possible is retained by the air force or the SIAé. In this way, the *dirigiste* model that marked French industrial policy from 1944 to the 1980s – featuring tight relations between state officials, directors of national companies and the air force – has largely been reproduced into a *neo-dirigiste* model where despite ownership and capitalisation being liberalised, most practices and behavioural norms have remained the same (Ansaloni & Smith, 2018).

Notwithstanding these clear differences between the British and French models of in-service support, recently there has been some convergence between the two. Whereas once there was a sharp contrast between two definitions of the public problem – one more neo-liberal and skewed in favour of externalisation, the other wedded in *dirigiste* fashion to maintaining a national defence industrial base – hybrids of both have recently begun to emerge (Giry & Smith, 2019). Significantly, in the DE&S's official discourse, A400M support is essentially valued for the jobs it helps to preserve:

*'January was a very busy month for procurement. I was pleased to see a series of announcements not only underlining our commitment to supplying and supporting our Armed Forces, but safeguarding hundreds of jobs with UK industry. We negotiated a £410 million contract to provide in-service support for the UK's Atlas A400M aircraft, securing a minimum of 400 highly-skilled British jobs.'*<sup>6</sup>

As we shall see below, this has broadly entailed the conditional re-legitimation of interventionism in the UK and a limited amount of liberalisation in France. Accordingly, greater space for co-operation across the Channel seems to have been

5 Interview, Former member of the MMAé, Paris, November 2017.

6 Tony Douglas, then CEO of DE & S ('Foreword', *Desider*, February 2017).



created. It is now time to see to what extent this potential has been transformed into real change around the case of supporting the Atlas airlifter.

## Equipment Support for the Atlas in France and the UK: Much Ado about Nothing?

Against the background painted above, instances of international co-operation over in-service support are not in themselves surprising, notably because of the cost-savings and practical advantages they may offer, particularly during joint expeditionary operations. However, such co-operations are not simple to establish and implement, in particular because of the contracting entailed. Using the concepts of problem definition and institutions introduced above, this section describes what Franco-British co-operation has been set up to support the Atlas, how this has come about and what it has so far changed. It will be shown that if the extent of actual change has been modest, the political communication around this co-operation has been anything but. This will be done by first examining how the relationship between actors from the UK, France and OCCAR (*l'Organisation conjointe de coopération en matière d'armement*) has played out, then by looking closely at how each national defence system has managed its relationship with Airbus, i.e. the Atlas's manufacturer.

### *From a European problem to a Franco-British one: surpassing OCCAR*

Stakeholders in the A400M throughout the six European countries involved initially began to think and act seriously over its in-service support in the mid-2000s. In particular, representatives of the British DE & S argued for a multilateral commitment to tackle this issue jointly. Having failed at this scale, however, they then moved to act bilaterally with France, partly as a means of taking the leadership on this issue out of the hands of OCCAR, –i.e. the European agency which, since 2001, has been in charge of encouraging co-operation over procurement. Here the account of an official from the British ministry of defence is highly revealing:

*'On A400M support, I tried unsuccessfully in 2007-8 to get 6 nations involved (...). Then I developed a strategy with X from the DGA in France where I proposed that if you find a way to pool spares with us, we could then say to the other four, 'this is how to do it.'*"<sup>7</sup>

Under the auspices of OCCAR, a memorandum of understanding on in-service support for the Atlas was nevertheless signed by all the nations engaged in the programme in 2011. As an ex-senior official in OCCAR explained in interview:

*'we agreed on a common configuration – without that you cannot do anything. A common repair maintenance strategy. We then knew we would all work to the same standards, pool our capacity and save ourselves a lot of money and have operational flexibility. Then we*

<sup>7</sup> Interview, DE & S official, Bristol, November 2017. NB. Caroline Laurent was the then head of all aeronautical programmes within the DGA.

*thought, why don't we all co-operate on doing the flight trials, e.g. for when the A400M does parachuting.*<sup>8</sup>

However, within OCCAR things then became bogged down in detailed arguments about how collaboration over support could be authorised and might affect overall workshare. The stalemate which ensued eventually led French and British stakeholders to move forward in 2014 without representatives from the other four countries. To quote the OCCAR press release:

*'On the 4 December 2014, OCCAR signed on behalf of France and the UK a joint initial support contract for their A400M fleets with Airbus Defence and Space. The scope of the contract includes Main Operating Base (MOB) aircraft maintenance activities for each Nation and common technical support services as well as common component repair services on a spares availability and pooling basis.'*<sup>9</sup>

The signature of this contract with Airbus was presented as a major step forward on both sides of the channel. In France, the head of the DGA, Laurent Collet-Billon, stressed that:

*'The aim, wherever possible, is to deepen our initial co-operation activities in the area of in-service support in order improve cost/efficiency savings. The contract we have just signed shows, under Franco-British leadership, the added value of a common approach to support; it opens the way for our other partners around the A400M to advance further in this direction.'*<sup>10</sup>

Speaking at the same press conference, the British Minister for Defence Procurement, Philip Dunne, highlighted the Franco-British dimension of this contract in the following way:

*'The signature of this joint contract for servicing the fleet of A400M Atlases is the culmination of several years of fruitful Franco-British discussions; it is thus an important milestone in our growing co-operation, one that lies at the heart of the agreements reached in line with the Lancaster House agreement.'*<sup>11</sup>

Not surprisingly OCCAR have presented this example of bilateral co-operation as the enactment of treaty engagements and as legitimising its own role:

*'The signature of this joint initial support contract for the two A400M fleets is a major achievement following several years preparation by OCCAR-EA, France and UK. It is an important milestone increasing mutual cooperation, which includes the benefits of spares pooling by the Participating States. In fact, this cooperative contract could become a model for the implementation of a Global Support Strategy for all six A400M Nations.'*<sup>12</sup>

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8 Interview, former OCCAR official, November 2017.

9 OCCAR press release, 4th December 2014.

10 Zone Militaire [ww.opex360.com/2014/12/08/cooperation-franco-britannique-pour-le-soutien-des-avions-de-transport-a400m-atlas/](http://ww.opex360.com/2014/12/08/cooperation-franco-britannique-pour-le-soutien-des-avions-de-transport-a400m-atlas/) posted 8th December 2014; consulted 21st May, 2018

11 *Ibid.* Signed by the British and French governments in 2010, the Lancaster House agreement concerns two bilateral treaties on defence and security.

12 OCCAR press release, 4th December 2014.

Indeed, as an ex-official from OCCAR put it in interview, his former organisation sees European co-operation over in-service support as a vital move towards attaining what he and other actors in the defence domain call ‘operational sovereignty’:

*‘being able to go anywhere you want to do what you want to do, OK, you know what, sometimes international co-operation is the only way of doing this. But bizarrely, some people think they lose sovereignty through co-operating, because ‘what if the Germans let us down?’ But my experience is that in modern warfare we have gained much more in terms of operational sovereignty than we have lost, because you get more bang for your buck and awareness of the cost of support in particular.’<sup>13</sup>*

More generally, OCCAR have sought consistently to highlight the importance of:

*‘demonstrating the huge benefits of cooperation during the In-Service phase. This is very under exploited during the In-Service phase (...). It is clear that in today’s business driven world, it’s not enough to talk in general terms about cooperative benefits, we need to show the benefits in hard cash and operational capability terms. And that is exactly what we are doing.’<sup>14</sup>*

In summary, bilateral treaties (Saint Malo and Lancaster House), OCCAR’s prompting but also attempts by mid-level actors to go faster than this European agency were key drivers of the 2014 Franco-British agreement to co-operate over servicing the Atlas. However, during the implementation phase of this agreement, i.e. when it came to turning abstract commitments to co-operate into actual policy instruments and servicing practices, other more specific issues soon emerged.

### *Contracting for support, with or without the manufacturer*

Indeed, the key obstacle which quickly became evident was the way each national air force and defence ministry had already committed to contracting with Airbus over the Atlas’s in-service support. The contrast in these arrangements either side of the channel, and in particular their effects upon manufacturer-air force relations, has indirectly but surely contributed to limiting the scope and ambition of Franco-British co-operation.

In the case of the British, the first thing to grasp is that the vast majority of in-service support for the Atlas is actually carried out by Airbus within the scope of a £410 million agreement. Importantly, this is presented as ‘part of the UK’s ongoing commitment to the Atlas programme which is sustaining 8,000 jobs across the national supply chain’.<sup>15</sup> This contract takes concrete manifestations in the form of an extremely close relationship, centred on RAF Brize Norton in Oxfordshire, between RAF personnel working for the manufacturer (Airbus), alongside other civilian technicians (contracted in from Flybe), all ostensibly working within a ‘Single Engineering Organisation’ (SEO):

13 Interview with ex. OCCAR senior official, November 2017.

14 Foreword to OCCAR’s Business Plan 2016 by that organisation’s then director, Timothy Rowntree, pg. 5.

15 *Desider*, the magazine of the DE & S, March 2018, p. 17.

*'A new state-of the art 24,000m(sq) hangar and MRO facility at Brize Norton, Government-owned but maintained by Airbus, was opened in May 2017 to provide integrated support for both line and depth maintenance. This facility features two large deep maintenance bays, underfloor power systems, as well as automated parts dispensing and tool-tracking. It also includes another bay for line maintenance. The new facility, [which] features 350 RAF, Airbus, FlyBe and DE&S civilians working together under one roof (...). This, another example of 'Whole Force' in action means that: "Our RAF technicians are interchangeable with their Airbus colleagues. It's something that works very well, because it means we can flex manpower here and there as we would require it.'*<sup>16</sup>

In short, what needs to be highlighted here is that in the mid-2010s British decision-makers chose to delegate almost all in-service support to Airbus and, in so doing, to give managers of that company a free rein to employ subcontractors from the private sector to undertake the work required. Moreover, they even went a step further in lending RAF personnel to the primary and secondary contractors as a means of acquiring, and then retaining within the state, key knowledge about the aircraft.

Meanwhile, on the French side, in-service support for their A400Ms has been concentrated in a base in Orléans where again, exceptionally large hangars have been built. However, here the work is run by a specific squadron of the Air Force (*l'Escadron de Soutien Technique Aéronautique* 2E 061 'Loiret'). Consequently, if a small set of Airbus personnel are present on the base, they only occasionally give advice or actually intervene over very specific matters. Instead, most of their role is reduced to ensuring that replacement parts arrive quickly so that the written contract between the Ministry of Defence and Airbus is respected to the letter. Consequently, virtually all servicing of France's A400Ms is carried out by personnel working either for the *Armée de l'air* or for the SIAé (i.e. the national ordinance company that is still part of the French state).

Given the parameters set by these contrasting contractual arrangements, what role then does Franco-British co-operation actually play in servicing this aircraft? The general view on both sides here remains positive. According to the RAF's liaison officer in Bordeaux, for example, 'the A400M is probably the centrepiece' of all Franco-British co-operation at the present time:

*'at the moment. Britain and France are key operators of this aircraft. We are trying to share our experience of bringing the aircraft into service. We have some initiatives such as 'cross-servicing': the possibility of French engineers to provide services for British aircraft and vice versa. Again that is significant because in an era of airworthiness and licencing, in order to allow an engineer to do this to another country's aircraft entails a whole lot of documentation etc. It is actually quite a difficult process. The way the project will go forward is to work through these issues.'*<sup>17</sup>

From the French side too, co-operation with the British over servicing this aircraft is clearly well valued. According to a key agent in the French air force's CFA, however, the main problems they, and therefore this mode of Franco-British co-operation, have faced are instead with the primary contractor (Airbus) and the mediator (OCCAR):

16 <https://www.aerosociety.com/news/atlas-shoulders-the-load/>, posted 2<sup>nd</sup> January 2018, consulted 21st May, 2018.

17 Interview, Bordeaux, Orr, March 2017.

*'Our main opposite number is obviously Airbus, the company that won the market. But we have just been through a difficult period where we were not allowed to contact its sub-contractors directly. This really slowed down putting the aircraft into service within the Armée de l'air. And part of this delay is down to OCCAR who, formally, should intervene as a mediator between us and the manufacturer. But OCCAR for me is a nebulous entity – we put information into it and nothing happens for months. And of course it can't act until all the countries involved agree... all this has created loads of inertia'.*

The conclusion this officer reached is that this situation:

*'created a problem of mutual trust. We lost trust in the companies involved. They tended to say we were using the aircraft badly and that all the problems stemmed from that. And indeed Airbus did not hold back from comparing the performance of A400Ms delivered to different countries in order to point out those who, in their view, were doing it wrong. But they never sought to understand why each country services its aircraft in ways that can vary widely.'*<sup>18</sup>

Indeed, if in the British case Airbus is given a much freer hand, in France the interface between Airforce and Airbus personnel is a major source of tension. Certain French actors are particularly critical of Airbus and even see it as reducing French operational sovereignty, some going so far as to conclude that 'it's better to be captured by Dassault than by Airbus'.<sup>19</sup>

To fully grasp what has been at issue in France, it is necessary of course to hear Airbus's side of the story. Interestingly, as for some members of *l'Armée de l'air*, according to some of this company's senior representatives based in Paris, OCCAR is the major source of tension:

*'the contracting agency is not the DGA but OCCAR. So every time we want to modify something in the contract, even on a technical point, immediately it is OCCAR that looks at it with criteria of its own – and this in the knowledge that OCCAR is its member states. And such change cannot touch anything to do with workshare...'*<sup>20</sup>

However, other actors from Airbus much closer to the practical challenges of actually servicing the Atlas instead see the problem as entirely French-made:

*'our state has chosen to retain a capacity to conduct a great deal of in-service support within the Airforce. This has inevitably meant we have to co-ordinate much more with Airbus – something that has been very difficult because both organizations have different cultures and approaches to the contract that binds them together' (...) 'And in the case of the A400M the overall result has been that no constructive dialogue has been built between our representatives and the those of the air base in Orléans. There are daily meetings, but often our people go there just to be told off because there are delays over this and that.'*<sup>21</sup>

Part of these difficulties have apparently been resolved by the creation in September 2015 by the French air force of a '*plateau technique*' bringing all the actors to the table in a relatively informal way. This has ironed out some misunderstandings and enabled some restoring of trust. However, a number of tensions clearly remain.

18 Interview with a CFA official, November, 2016.

19 Interview with a director of SIAé, April 2016.

20 Interview, Political Affairs official, Airbus Group, September, 2016

21 Interview, Airbus official, Bordeaux, June 2016.

Indeed, it is precisely this tension which has also hampered Franco-British co-operation of in-service support. To cite another Airbus representative:

*'This is an important point because it characterizes the French approach. You won't find this distrust of Airbus on the British side because their approach is quite different. They have placed the frontier between manufacturers and the state much closer to operational units. If French air force personnel are trained much like their British counterparts, they keep the manufacturer much further away from the operational dimension of support. It's changing, but only slightly – there are still very few people from the manufacturer anywhere near in-service support.'*<sup>22</sup>

This Franco-British difference in the institutional ordering of in-service support means that in practice, even sharing spare parts or preparing to conduct maintenance for the air force of the other country is not as straightforward as it may seem.<sup>23</sup> In summary, despite the mediated commitments made by politicians to co-operate across the channel over servicing the Atlas, very little actual joint work has occurred and, at least to date, few cost and time savings have been made. The way contracting has occurred with OCCAR has clearly had an impact and, at times, impaired concrete co-operation across national defence systems. In the case of Franco-British co-operation, however, what has been even more important has been each state's decision on how to contract with the manufacturer: Airbus. But, in turn, this level of explanation of the underwhelming levels of co-operation achieved to date over the Atlas begs a deeper question: why have the British contracted nearly all in-service support to Airbus, whereas their French counterparts continue to conduct most of this activity within the state, thereby leaving Airbus largely on the side lines?

## The Prevailing Centrality of Industrial Policy

Ultimately, the weakness of Franco-British co-operation over servicing the A400M can only be fully explained by examining more directly the continuing impact of industrial policy on the institutional ordering of defence procurement either side of the English Channel. Indeed, this is what Samuel Faure concludes for the actual procurement of the Atlas: what is important is the degree of interdependence between industrialists, civil servants and key politicians (Faure, 2016). Put differently, the bureaucratic and legal challenges of writing contracts and respecting norms addressed in section 2 should not be given as much importance as many of the actors involved spontaneously do. Of course, such hurdles are difficult to surmount, but far from impossible. For example, having to wait for OCCAR's agreement on certain issues has undoubtedly frustrated officers in the RAF and *l'Armée de l'air* seeking to accelerate their collaboration. Nevertheless, such delays do not account for the more structural obstacles that lie in their path. Instead, two deeper levels of explanation are more telling: the institutions in each country through which in-service support is

22 Interview, The Department of Political Affairs, Airbus, October 2016.

23 Interview, The Department of Political Affairs, Airbus, October 2016.



enacted, then the discourse, rhetoric and symbols used to provide them with meaning and legitimacy.

### *Contrasting Institutional Orders*

To begin this point on the institutionalised ordering of equipment support in the two countries under study, one needs to reject from the outset simplistic, culturalist generalisations which see the British institutional ordering of defence procurement as ‘liberal’<sup>24</sup> and the French as intrinsically interventionist. Such stereotypes only serve to hide the fact that each national model is in fact a hybrid of market and national-interest based thinking and, thus of industrial policy.

More precisely, reducing the British and French procurement models to polar opposites first prevents analysis from grasping the significant move away from neo-liberal defence policies that has been made in the UK over the last decade. During this period, British decisions on how to support defence equipment have become increasingly heterogeneous, each mode of going to market and contracting now being tailored to analysis of the precise military requirements at issue, degrees of likely competition between suppliers and the long-term impacts of each possible type of call for tender and contracting. Significantly, the building in of through-life costing to acquisition decisions has turned out to be a key driver of change in British State-Military-Defence Industry relations as a whole. As we relate elsewhere (Giry & Smith, 2019), this shift away from the ‘value for money’ framing of procurement by arch neo-liberals towards what we label ‘value management’ has progressively taken place over the past ten to fifteen years. During this time two key developments have taken place.

The first concerns the UK’s Ministry of Defence and its relationship to both the armed forces and private companies. As the sociology of organisations and of the state help us understand (Carpenter, 2001; Pollitt and Talbot, 2004; Christensen and Lægheid, 2006), the decision taken in 2000 to hive off a large part of this ministry into a separate Defence and Equipment Support Agency (DE & S) has had a number of effects upon how its staff have come to see their role and even been recruited. Relocated to Bristol in the mid-2000s on a dedicated site, this agency has progressively gained in autonomy as regards certain norms and rules which have long predominated in Whitehall. Specifically, although still under the responsibility of government ministers, the DE & S has been able to recruit staff using its own

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24 This is not to say that such liberals do not still exist in the UK. For example, Lewis Page - a former Navy soldier and influential military affairs columnist in Britain - has defended an off-the-shelf purchase in the name of capability: ‘Britain’s just a third class power. And yet our defence budget is the fifth biggest in the world. It’s around the same as that of France, and France has a proper aircraft carrier - complete with planes. France also has hundreds of operational strike jets, not scores; it has maritime-patrol planes; its army may soon have twice as many soldiers as ours. Why don’t we have all that? The answer is, mostly, the British defence industry. Dominated by BAE Systems, our arms industry is lamentably inefficient. Its products are often horrifyingly expensive. They require parts and technical support not only from the US but other nations too - we gain no independence by purchasing “British-made” kit like the Eurofighter. (The Eurofighter cannot be sold without American permission as it is full of US technology.) If, instead, we simply bought off the shelf, mostly from America, we could easily afford powerful forces. [...] So the way ahead is clear. Let most of the UK arms businesses go to the wall. Yes, there would be job losses but we get those anyway - BAE has been steadily shedding its British workforce for a long time. We should break up the RAF and distribute the useful parts between the Army and Navy. [...] We should cancel our order for A400M European transport planes, and buy more C-17s and C-130s cheaply from the US’ (Page, 2015).



criteria and procedures, pay them without having to respect civil service ceilings to the letter and, above all, drive forward ‘the professionalisation’ of decision-making and its preparation throughout its departments.

Indeed, the latter point spills into a second set of developments in the UK regarding the tools of management that have been used to refine British governmental methods of buying defence equipment and its servicing. Here, as the sociology of management encourages us to grasp and highlight (Yates, 1989; Power, 1997; Shore and Wright, 2015), both within the DE & S and its public (the armed forces) and private ‘partners’ (manufacturing and servicing companies), particular emphasis has firstly been placed upon the importance of data generation, analysis and usage within decision-making. As a range of interviewees stressed to us, in order to have any impact upon this process, all actors involved ‘need to know their numbers’. This trend has proved particularly important in integrating analysis of projected support costs within decisions to be taken about the initial buying of different pieces of equipment.

This focus on data has in turn impacted on a second change in the preparation of procurement decisions which staff in the DE & S have recently sought to formalise around the notion of ‘routes to market’: instead of always buying from the cheapest ‘bidder’ on the basis of an open call for tender, in cases where only one company is likely to genuinely compete for the contract, the DE & S has now freed up the possibility of setting and managing its terms in much more interventionist ways than hitherto. Again, this is presented as being part of a shift towards ‘value management’ and, more generally, to the emergence of a new way of procuring defence equipment and its support which mixes elements of market-thinking and industrial-type policy.

In contrast to the British case, relations between the Ministry of Defence, the armed forces and defence companies in France are still deeply structured by quite different frames, instruments, interdependencies and channels of communication.

In terms of frames, French policy and practice is still heavily influenced by longstanding commitments not only to retain in-house support capacity, but also to continue to favour national firms whenever possible. In terms of policy instruments, this framing of the public ‘problem’ means that although, in the last few years, in-service support has, as in the UK, become a key issue for the French state and air force, and even been formalised in the form of a policy concept – le *Maintien en Condition opérationnelle* (MCO) – certain ways of going to market and contracting remain taboo. Over the last few years, attempts have been made within the French state to loosen the linkages between defence procurement and industrial policy. Indeed, those in favour of such a change have targeted in-service support in particular. However, defenders of governmental interventionism have thus far prevailed. Indeed, the reproduction of both policy frames and instruments in this country is undoubtedly still fuelled by the high degree of interdependence which continues to characterise linkages between key parts of the state (the DGA and the DMAÉ), large ‘French’ firms such as Dassault, Thales and Safran and the *Armée de l’air*. As Faure, Joltreau and Smith’s piece (2019a, see also, 2019b) in this special issue on the continued presence of state representatives and ex-state officials on the boards of these companies shows clearly, if the commercial and investment activities of these French companies have clearly internationalised over the last decade, their corporate governance remains firmly wedded to a longstanding and trans-industry neo-*dirigiste* model.

### *Legitimation through meaning-saturated discourse, rhetoric and symbols*

From a purely short-term cost-benefit analysis point of view, this distribution of Atlas's production over several sites all over Europe is difficult to justify. It involves significant coordination costs. As Katherine Bennett, Vice President of Airbus UK, points out:

*'It's critical for [Airbus UK] to ensure that the wings that we build in Broughton and in Filton can get to France and Germany for the final assembly line.' Animated by a form of 'technical solidarity', the actors must therefore co-ordinate in order to be able to work together. This international division of labour is also a political challenge in itself: it requires the development of forms of coordination dependent on current political treaties, which may be called into question by updates on international relations, such as Brexit'<sup>25</sup>.*

Consequently, the actual work process involved has become a means of creating political pressure on public decision-makers. Thus, Bennett insists that 'a three-hour wait on a lorry at Dover' 'would be a critically bad issue for Airbus', as would 'delaying cargo flights carrying completed wings to Europe'. She adds: 'It would be very expensive for us and a burden we don't want to be suffering. Our key preference is for the UK to remain a home nation for Airbus. But we really need the conditions for us to be effective. We don't want extra costs on our UK business which may make Airbus think differently about us'.<sup>26</sup>

Just as importantly, however, in addition to contrasts in public and private management methods, Franco-British co-operation over servicing Atlases has been affected by how these practices have been legitimised in ways that are more overtly political.

Seen from this perspective, the following citations enable one to understand better why many French actors find it so difficult to understand the British model of in-service support:

*'In fact no genuine argument has been built to keep such a large maintenance staff within the Armée de l'air. But the symbolic dimension is so strong that any change simply will not take place.'*<sup>27</sup>

Or, as an interviewee from the *Armée de l'air* put it: 'Ultimately, symbolically we cannot allow ourselves to externalise support as much as others do. There would be too many protests.'<sup>28</sup>

Of course, on the British side there are undoubtedly just as many symbol-laden obstacles to genuinely understanding the French model of procuring support which, in turn, act as a brake upon pushing for stronger cross-channel co-operation in this area. As the computerised content analysis of UK ministerial speeches since 2000 that we have presented elsewhere highlights (Giry & Smith, 2019), 'capability' has been linked to two new lexical classes, particularly since the 2010 general election. One of them, the management of relations with industrial suppliers, is of course no stranger

25 Tophan, G., 2018. "Airbus may leave UK unless there is urgent clarity on Brexit trade". *The Guardian*, 5 mars 2018.

26 *Ibid.*

27 Interview, Airbus official, Bordeaux, June 2018.

28 Bordeaux, November, 2016.

to French ears. From this angle, for example, the term capability is used alongside ‘Industry’, ‘Export’, ‘Innovation’, ‘Supplier’, etc. The second angle however, that of managing the national budget, places ‘capability’ alongside words such as ‘Budget’, ‘Deficit’, ‘Spend’, ‘Review’ and ‘Sustainable’ – terms that are most often understood and reacted to in quite different ways in the French institutional ordering of defence procurement.

To recap then, the symbol-laden terms listed above act alongside the arguments made in favour of the different policy instruments and practices used on either side of the English Channel to procure in-service support for aircraft such as the Atlas. They are all part and parcel of the differences in industrial policy which make each national model so distinctive. Many practitioners find the model of their opposite numbers difficult to comprehend, let alone to co-operate with. Indeed, therein resides the deepest reason why the particular example of Franco-British co-operation has so far proven to be so limited in its concrete realisations.

## Conclusion

In conclusion, despite the considerable work done to foster co-operation to service A400Ms by mid-level, and even senior, actors in the French and British states, air forces and defence firms, to date this has not been enough to overcome structural differences between the two national procurement and through-life management systems. More of such work may of course promote more co-operation over detailed matters such as the modes of contracting analysed in part 2 of this text. It is important not to forget that by generating interdependencies between national spaces, the collaborative production of the A400M has contributed to producing a common political space over defence equipment. Thus, when an anti-corruption investigation affects Airbus, the investigations are carried out in different national areas and the company is depicted as being ‘in turmoil amid corruption investigations in Britain, France and Austria;’<sup>29</sup> or when a workforce reduction plan is evoked, as in 2013 or 2018, it threatens positions in Great Britain and France, amongst other countries. In short, this underlines the level of industrial interdependence that today’s European defence economy now features.

Nevertheless, as part 3 has just underlined, higher levels of joint Franco-British support of the Atlas are unlikely to be achieved without even more difficult work being done which targets the structural rules, relationships and mind sets that are currently obstructing the goal of achieving fully cross-national and thus bilateral support for this aircraft. Indeed, combining structure and agency, these causes lie at the heart of the example of differentiated co-operation this article has sought to describe and explain. More informed analysis of these impediments to greater economic and political integration might encourage a franker, more fruitful cross-Channel dialogue which might, one day, unblock this situation. However, what one can say with more certainty today is that although other similar attempts at bilateral co-operation are likely to be launched in the future, mutual incomprehension is likely to remain, then impact heavily upon their implementation. The concepts and tools of

29 Sage A. (2018). “Airbus warns of 500 job losses in UK”. *The Times*, 8 mars 2018.

constructivist political sociology and economy deployed in this text will not solve either such misunderstanding or its knock-on effects. But they do at least enable research and reflexive practitioners to be more aware of precisely what it is that they are trying respectively to explain or struggle against.

## References

- Ansaloni M., Smith A. (2018) «The neo-*dirigiste* production of French capitalism since 1980: the view from three major industries», *French Politics*, 16(2), p. 154–178. <https://doi.org/10.1057/s41253-018-0061-1>
- Baylis, J., (1989). *British Defence Policy: Striking the Right Balance*. New York: Palgrave MacMillan. <https://doi.org/10.1007/978-1-349-19823-8>
- Bouchet-Valat, M., Bastin, G. (2013) “RcmdrPlugin.temis, a Graphical Integrated Text Mining Solution in R”, *The R Journal*, 5(1), p. 188–196. <https://doi.org/10.32614/RJ-2013-018>
- Bourn, J., (1994). *Securing Value for Money in Defence Procurement*. London: RUSI Whitehall Paper.
- Cour des Comptes. (2013). Les achats de maintenance du ministère de la défense : un fort potentiel d'économies. Rapport public annuel 2013. Paris.
- Carpenter, D. P. (2001). *The Forging of Bureaucratic Autonomy. Reputations, Networks, and Policy Innovation in Executive Agencies, 1862–1928*. Princeton: Princeton University Press.
- Christensen, T., Lægreid, P., eds. (2006). *Autonomy and Regulation. Coping with Agencies in the Modern State*. Cheltenham: Edward Elgar.
- Deakin, S., (2010). “MOD PLC: New Labour, Managerialism, Marketisation and the Privatisation of British Defence Policy”. In: D. Brown, ed. *The Development of British Defence Policy: Blair, Brown, and Beyond*. London: Routledge, 139–152.
- Dorman, A. M., (2002). *Defence Under Thatcher*. London: Palgrave MacMillan. <https://doi.org/10.1057/9781403932853>
- Dorman, A. M., Uttley, M. R. H., Wilkinson, B., (2016). “The Curious Incident of Mr Cameron and the United Kingdom Defence Budget: A New Legacy?” *The Political Quarterly* 87 (1), 46–53. <https://doi.org/10.1111/1467-923X.12226>
- Droff, J., (2013). Le facteur spatial en économie de la défense: application au maintien en condition opérationnelle (MCO) des matériels de défense. Thèse en économie, Université de Bretagne Occidentale.
- Erbel, M., 2017. “The Underlying Causes of Military Outsourcing in the USA and the UK: bridging the persistent gap between ends, ways and means since the beginning of the cold war”. *Defence Studies*, 17 (2): 135–155. <https://doi.org/10.1080/14702436.2017.1294970>
- Faure S. (2016) *Variétés de la décision. Le dilemme de la politique d'armement en Europe: le cas de la France de 1945 à nos jours*, Phd Dissertation, Sciences Po Paris.
- Faure S. (2019) ‘The choice for a minilateral Europe. A Historical Sociology of Defence-Industrial Capitalism’, *European Review of International Studies*, <https://doi.org/10.3224/eris.v6i2.05>

- Faure S., Joltreau T., Smith A. (2019a) 'The Differentiated Integration of Defence Companies in Europe: A Sociology of (Trans)National Economic Elites', *European Review of International Studies*, <https://doi.org/10.3224/eris.v6i2.07>
- Faure S., Joltreau T., Smith A. (2019b) 'Qui gouverne les grandes entreprises de la défense? Contribution sociologique à l'étude des capitalismes en France et au Royaume-Uni', *Revue internationale de politique comparée*, <https://www.cairn.info/revue-internationale-de-politique-comparee-2019-0.htm#>
- Faure S., Lebrou V. (2020) 'L'Europe à l'âge de la géométrie variable', *Politique européenne*. forthcoming
- GAO. (2003). Best practices: setting requirement differently could reduce weapon system total ownership costs (No. 03-57). GAO-03—57 US, Government Printing Office, Washington D.C.: General Accounting Office.
- Giry B. (2019) 'L'arme comme capital. Enquête sur la gestion des systèmes d'arme aux Etats-Unis', forthcoming.
- Giry B., Smith A. (2019) 'Defence Capability in the UK since 2010: Explaining Change in Procurement Practices', *British Politics*, <https://DOI:10.1057/s41293-019-00125-4>
- Gusfield, J. (1981), *The Culture of Public Problems. Drinking-Driving and the Symbolic Order*, Chicago: University of Chicago Press.
- Hartley, K., 1991. *The Economics of Defence Policy*. London: Brassey's.
- Hay C. (2016) 'Good in a crisis: The ontological institutionalism of social constructivism', *New Political Economy*, 21(6): 520–535. <https://doi.org/10.1080/13563467.2016.1158800>
- Joana J., Smith A. (2006) 'Changing French Military Procurement Policy: The State, Industry and 'Europe' in the case of the A400M', *West European Politics*, 29 (1): 70-89. <https://doi.org/10.1080/01402380500389257>
- Jones, P. M., 1987. "British Defence Policy: the Breakdown of Inter-Party Consensus". *Review of International Studies* 13 (2), 111–131. <https://doi.org/10.1017/S0260210500113683>
- Kincaid, B., 1997. *A Dinosaur in Whitehall: The True Cost of Defence Procurement Bureaucracy*. London: Brassey's.
- Kincaid, B., 2001. "Smart Procurement: Revolution or Regression?" In: R. Matthews, J. Treddenick, ed. *Managing the Revolution in Military Affairs*. London: Palgrave Macmillan, 175-190. [https://doi.org/10.1057/9780230294189\\_11](https://doi.org/10.1057/9780230294189_11)
- Kincaid, B., 2008. *Changing the Dinosaur's Spots: The Battle to Reform UK Defence Acquisition*. London: Royal United Services Institute.
- Louth, J., Taylor, T., 2015. "Beyond the whole force. The concept of the defence extended enterprise and its implications for the Ministry of Defence". RUSI Occasional Paper.
- Lynn J.A., ed. (1993) *Feeding Mars. Logistics in Western Warfare from the Middle ages to the present*, Boulder: Westview Press.
- Mawdsley J. (2013) 'The A400M Project: From Flagship Project to Warning for European Defence Co-operation', *Defence Studies*, 13(1): 14–32. <https://doi.org/10.1080/14702436.2013.774961>
- MoD. (2006). Enabling Acquisition Change. An examination of the Ministry of Defence's ability to undertake Through Life Capability Management. Ministry of Defence.

- Moore, D. M. (2016). "Professionalism in Defence Acquisition: The Importance of Knowledge and the Concept of the Intelligent Customer". In: K. Burgess, Antill, P. D., ed. *Emerging Strategies in Defense Acquisitions and Military Procurement*. Hershey: IGI Global, 242–262. <https://doi.org/10.4018/978-1-5225-0599-0.ch014>
- National Audit Office, 2015. *Reforming Defence Acquisition*. Report by the Comptroller and Auditor General, HC 946.
- Nee V. (2005) "The New Institutionalisms in Economics and Sociology", in N.J. Smelser, R. Swedberg (eds), *The Handbook of Economic Sociology*, 2nd ed., Princeton NJ/New York, Princeton University Press/Russell Sage Foundation, p. 4974. <https://doi.org/10.1515/9781400835584.49>
- Page, L. (2015) "Break up the RAF and stop buying British", *The Telegraph* <https://www.telegraph.co.uk/news/uknews/defence/11642595/Break-up-the-RAF-and-stop-buying-British.html>
- Pollitt, C., Talbot, C., eds. (2004). *Unbundled Government: A Critical Analysis of the Global Trend to Agencies, Quangos and Contractualisation*, London: Routledge. <https://doi.org/10.4324/9780203507148>
- Power, M. (1997). *The Audit Society. Rituals of Verification*. Oxford: Oxford University Press.
- Ratinaud, P. (2009). *Iramuteq: Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires*. <http://www.iramuteq.org>
- Rocheffort, D., Cobb, R. (1994), *The Politics of Problem Definition*, Lawrence: University Press of Kansas.
- Shore, C. Wright, S. (2015). "Governing by numbers: audit culture, rankings and the new world order", *Social Anthropology*, 22–28.
- Smith A. (2010) *Le gouvernement de l'Union européenne*, Paris: LGDJ.
- Smith, A. (2016) *The Politics of Economic Activity*, Oxford: Oxford University Press. <https://doi.org/10.1093/acprof:oso/9780198788157.003.0003>
- Uttley, M., 2001. "Defence Procurement and Industrial Policies". In: S. Croft, A. Dorman, W. Rees, M. Uttley, ed. *Britain and Defence 1945–2000. A Policy Re-evaluation*. London: Routledge, 115–133.
- Yates, J. (1989). *Control through Communication: The Rise of System in American Management*, Baltimore: John Hopkins University Press.