

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

This PDF is auto-generated for reference only. As such, it may contain some conversion errors and/or missing information. For all formal use please refer to the official version on the website, as linked below.

Outer Space, and Security as Integration in Europe

<https://www.e-ir.info/2010/12/05/outer-space-and-security-as-integration-in-the-european-union/>

BLEDDYN E. BOWEN, DEC 5 2010

To what extent does Ole Wæver's 'security-as-integration' argument remain valid when analysing European policy and activity in outer space?

To begin, the meaning of Europe must be defined. Europe has a dual meaning in this essay – member states of the European Union (EU), and the members of the European Space Agency (ESA). Not all members are within both organisations. This is particularly fascinating since ESA policy has been increasingly directed by the EU.[1] Indeed, the long term political goal according to Director General Jean-Jacques Dordain is to make ESA an agency of the EU by 2014.[2] In his chapter in *Security Communities*, Ole Wæver describes Western Europe as a security community. It has expectations of peaceful change, and war between the members of this security community treat war with each other as an unthinkable option. He claims this security community has developed due to 'desecuritisation', where traditional mutual security concerns were marginalised and the west European states could focus on other areas of policy. He states that today, there is an emerging resecuritisation, but with Europe as the referent object.[3] This conceptualisation of Europe seems to be verified by European policy and activity in outer space. Following from the very short summary of Wæver's concepts this essay will examine how they stand up against European Space Policy (ESP) and ESA's policies and projects. After this will be an analysis of how well the EU/ESP and ESA fit into the three conceptual points that Wæver uses to categorise European security. The essay concludes with one main criticism: that Europe in regards to space is not a *complete* referent object yet – the state continues to be important.

The first concept from Wæver, which is most pertinent to this essay, is his idea of Europe being the referent object and treating integration as a security issue, where the European Union is faced by two outcomes: that of further integration or fragmentation. The latter is unacceptable if we see Europe as the referent object. It is a question of whether Europe will *be* at all when dealing with the securitisation of integration.[4] Second is his definition of good statesmanship as finding a convergence of interests between the European and state levels. Thirdly, and leading on from the second concept, European space activities can be seen as another layer of identification, and does not undermine the nation-state. The EU and its relationship with ESA provides a very interesting insight and test case for these concepts. The distinction made between the EU and ESA is a hesitant one in this essay. The overlapping of responsibilities and the increasing control of the Commission make for a blurred and indefinite distinction. This should not be taken too seriously or arbitrarily – the distinction is there to give structure to this study of the main facets of *European* integration in regards to outer space activities. Perhaps if a similar study was undertaken in ten years' time there may not be a distinction at all.

The European Space Agency

ESA is a good example, in this author's view, of states coming together to undertake joint operations which are fiscally, politically and technologically out of reach of a single European state. Kazuto Suzuki calls it a 'coalition of weaks'.[5] 'Weak' is relative to the space prowess of the United States, Russia, more recently China (in regards to human spaceflight capability). The Czech Republic is the newest full member of ESA, bringing the total number of members to eighteen. It is worthy to note that Switzerland and Norway are full members of ESA, but are not members of the EU. ESA offers a graduated stage of membership to its ranks that aims to build up a candidate state's space industry in the years preceding full membership (if indeed that is the final decision of the candidate).[6] With each graduated stage of membership completed, financial contributions and responsibilities increase. Currently, many

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

eastern EU member states are European Cooperation States (ECS). This is a five-year plan that, upon completion, gives the option of renewing another five year plan or applying for full ESA membership. This is the path that the Czech Republic took. It is credible to speculate that in the coming years Poland and the Baltic states, among others (as ECSs), will become full-fledged ESA members. For example, given Poland's participation in G-MOSAIC (GMES services for Management of Operations, Situation Awareness and Intelligence for regional Crises), an early-warning, crisis management and surveillance system, and already member of NATO, Poland's future membership seems likely. Funding of operations is divided between mandatory projects (in which members fund them as a percentage of national income) and optional projects are voluntary. This voluntary system helps to create flexibility to meet the demands of some member states in outer space whilst not forcing others to 'tag along' at great expense. Interestingly, the mandatory projects are related to studies on future projects, technology research, shared technical investments, information systems and training programmes, whilst the optional projects for example include satellite navigation, Earth observation and telecommunications.[7] Acknowledging that this is crass generalisation, it can be seen that the 'softer' and less potentially divisive and cheaper projects are mandatory. Conversely, the security and defence related areas, which are resource intensive, costly, and politically sensitive, are optional. Could this be a strategy by ESA to reduce institutional and intergovernmental friction?

The largest players (in budget contributions) in ESA are France and Germany. Between them they are responsible for 34.9% of ESA's funding. It is also interesting to note that approximately 20% of ESA's 2010 funding comes directly from the EU.[8] ESA today has numerous projects, ranging from science and exploration, such as the Huygens Titan probe and Lunar and Martian robotic projects, to the EU-led commercially and security-oriented Galileo and Global Monitoring for Environment and Security (GMES) projects. In this discussion, Galileo and GMES warrant special attention. This is due to the far-reaching security and international relations impact of the two. Galileo is important for European states, particularly their armed forces. It will give them, and the EU Battlegroups and CSDP (Common Security and Defence Policy) missions the force enhancement and navigation capabilities they need that are not under unilateral American control. Augmenting this is GMES – its official capacity is to monitor Earth's environment. However "GMES also supports the critical decisions that need to be made quickly during emergencies, such as when natural or man-made catastrophes and humanitarian crises occur".[9] This clearly implies GMES's capacity to aid military/civilian operations, precisely those of the CSDP. As well as this, among its six 'thematic areas', 'emergency' and 'security' are two of them. These terms are so vague their meaning is up to the reader's interpretation. This is a concern raised by Frank Slijper: "that broad language could be interpreted as anything from preventing an environmental disaster from happening, to coordinating a military intervention to topple a foreign regime perceived as a threat to Europe." [10] This is even more evident when we consider the European Defence Agency's (EDA) MUSIS (Multi-national Space-based Imaging System). Iraklis Oikonomou identifies this as a clear demonstration of the turn towards military applications of Earth observation.[11]

This serves Wæver well if we consider the integration-security argument. Following on from the convergence of EU and ESA space policy, it is best to incorporate EU members into ESA for the sake of increasing the magnetism and returns of EU membership. This makes the EU worth staying in, especially if the EU succeeds in eliminating ESA's *official* 'separate-agency' status in the future. In practice, it seems to have already happened; both the EU and ESA have a unity of purpose, despite different institutional forms.[12]

European Space Policy

The official language in the ESP is that of the EU securing an area of vital strategic importance "that link[s] a wide variety of policy areas – from telecommunications to humanitarian aid".[13] According to the Commission, the ESP seeks to meet 'space-based security and defence needs'. The Resolution on ESP in 2007 has concrete references to the strategic value of GMES. It also contains wishes for the establishment of a commercially sustainable civil satellite navigation system (i.e. commercial success of Galileo), a distinction between civil and military space programmes and the need for greater coordination with the EDA (i.e. MUSIS), and the recognition by "military users of GALILEO or GMES must be consistent with the principle that GALILEO and GMES are civil systems under civil control."

Following on from this, it also had passages referring to the crucial matter of keeping launcher assets under 'European' control.[14] As Oikonomou suggests, going beyond the rhetoric, we can easily attach the military applications behind the objectives stressed in official documentation.. The blurring of the civilian and military uses of

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

space assets such as GMES, Galileo, MUSIS and autonomous launcher capability, are omitted from this documentation, despite the blurring of the two paradigms in the Common Security and Defence Policy (CSDP) missions – which are both civilian and military in nature. Oikonomou refers to official recognition of this blurring in space among national government rhetoric and from EU officials, but it is absent or neglected in EU documentation.

However, Frank Slijper notes that the 2003 White Paper on space policy is clearly driven by military logic, alongside business and industry logic.[15] The Director General of ESA, writing in an official attachment to the 2007 Resolution on Space Policy, clearly states that military and civilian needs and capabilities overlap each other in accordance with the EU's emphasis on synergy between civilian and military actors. He also noted that "planned systems such as Galileo and GMES *may* have military users".[16] It would not be completely unreasonable to hypothetically change the 'may' into 'will'. The capabilities of these EU/ESA projects will not be exclusive to the EU or EU-related tasks and missions, which do combine military and civilian 'solutions'. The member states will have access to these technologies because CSDP missions are intergovernmental in nature, and the member states will rely on European space assets. Indeed, the ESP hopes to make national space programmes complementary to that of the EU's and ESA's objectives, but in a way that does respect national sovereignty.[17]

For example, if we were to take the French point of view, current EU space policy and attitudes are consistent with France's traditional autonomy-driven logic.[18] According to the ESP, GMES information should flow both ways – information that GMES needs will be given to it by member states that have it, and vice versa. And, as GMES will be a more complete observation system, it enhances France's capabilities at a fraction of the cost of going it alone, because it can share the workload and financial strains with ESA members and EU funding. Jacques Chirac warned against the failure to respond to the USA's huge expenditure in space as it could result in a vassal status being given to European capabilities, and Europe itself.[19] The autonomy logic is satisfied, both in the French and European contexts as it provides a way of gathering needed information without having to rely on non-European states or organisations. The 2008 European Space Policy Progress Report states that the EU needs to strike a balance between an autonomous Earth observation capacity and cooperating with third party states, to the end of gaining a "wide range of data at the global level".[20] Whilst that is used in the context of the meteorological field, if we go beyond the rhetoric again, such a statement can easily be applied to intelligence-data gathering, amongst other security related information. However, as a caveat, it is by no means that a member state would share sensitive intelligence on the European level after acquiring it through national space capabilities.

Wæver's First Concept: Outer Space Policy integration as security

Nevertheless, we can use the preceding documents (from both ESA and the EU) and studies to portray Europe as the referent object in these topics of 'security' in space matters. The EU is there to defend and serve *European* citizens and itself. It sees itself as the entity that is capable of doing so, not individual member states. This is particularly eminent, once again, in the 2008 Progress Report:

"European space capacities have become critical information tools in addressing a diversity of environmental, economic and security challenges of a global or regional scale. Autonomous access to information derived from space is thus a strategic EU asset. The EU will need to further strengthen its ability to respond to these challenges, including in the security and defence domains, both through improved coordination and through the development of own capacities." [21]

The EU is making itself useful, from a space asset point of view. By drawing in funds from all over Europe, allowing members access to resources in an information-laden era, and allowing a way to eventually carry out force enhancement without dependence on the US, integration with the EU and membership/affiliation with ESA is a desirable option, if it is not already desirable enough. It increases the EU's magnetism because it is now trying to address more traditional security and defence concerns. Whilst far from ideal or perfect, it is an on-going process that cannot be ignored by entities or individuals hoping to understand the whole picture of European integration. It is potentially a very sensitive area when intelligence matters come to the fore. Trade interests are at stake due to e-commerce and the increasing dependence of business on space technology.[22] One figure puts the value of the global space market at \$251bn per annum and is growing at 11% per year.[23] It is worth noting that whilst space

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

assets are crucial to the monitoring of Earth's environment (i.e. the environmental 'challenge'), the environment itself in Earth orbit is an immediate and growing physical threat to space assets. Primarily, the issue of space debris is of concern to *all* actors in outer space. ESA is a member of the Inter-Agency Space Debris Coordination Committee (IADC), which is an international body that coordinates global space situational awareness (SSA) to track as much lethal debris in orbit as possible. Debris in orbit can travel at up to 7.8 kilometres per second. There are literally millions of debris pieces in orbit, and the total *trackable* debris in orbit in 2009 increased by 15.6%, largely due to the first ever collision of two satellites.[24]

Beyond these material security factors we can again consider the EU's magnetism. As a significant actor in space, ESA can fight its corner for the European member states (and the EU) with a collective voice on the universal problem of space debris. This furthers Wæver's security-as-integration argument, with more to gain from integration, it preserves the utility of first ESA, and this strengthens the EU in turn and keeps fragmentation at bay.

Greater integration and progress in European space capabilities, and consequently European states weaning their critical force-enhancement dependence away from the USA, is of increasing concern across the Atlantic. In the mid-1990s Alasdair McLean wrote that the Western European Union's (WEU) embryonic activities in military space capabilities were of no major concern to the USA. He did write, however, that this could change in future if greater capabilities were achieved by European states or institutions.[25] That time has already come and gone. In the early 2000s the EU had to fight its corner against the USA when the US DoD realised that they would lose military and economic leverage in satellite assets over Europe because of the Galileo project. The EU proved stubborn, even against NATO, and eventually the EU was allowed to have its way as long as Galileo did not interfere with GPS signals and were compatible with it.[26] The DoD tried to alleviate the need for Galileo by acquiescing to a previous European demand – selective accuracy (i.e. the availability of the most accurate positioning service) was removed.[27] Despite this the Galileo project went ahead – the 2010s will see the operational phases of Galileo, and GMES, begin in earnest.

'Europe' can clearly be seen as the referent point. The Commission stood up for Europe's interests. Whilst individual member states could have been placated by the USA's acquiescence over selective accuracy, we can extrapolate that the Commission felt that Europe needed a completely independent navigation system to prevent non-European interference in European matters. A strong division among the participating states of Galileo could have been quite damaging to the integration project, with Atlantacists on the one side and pro-European autonomy members on the other. Even the British were unable to continue opposition to Galileo on behalf of the Americans because of the lack of a 'blocking minority', and that it did not wish to be the 'Last of the Mohicans'. [28] Speculatively, one can accuse the Americans of trying the old British 'divide and rule' doctrine among doubtful EU members to maintain European dependence on US high technology.

Entwined with this is the fact that Galileo is a European project guided by the European Commission and the ESA Executive. Traditionally, optional ESA projects are led by a member state, however, Suzuki notes that doing the same with Galileo would have undermined "European solidarity". [29] Therefore, keen to avoid fragmentation, we can see the EU attempted to make sure such sensitive projects were not victim to suspicions of being hijacked for the leading-state's own interests. The EU practically controls the Galileo and GMES projects – forging European interests. At the time of writing, no major lack of political will for these two projects have surfaced among the participants. Perhaps the most significant tension was Britain's reluctance over Galileo,[30] but that has since abated.[31]

Wæver's Second Concept: Convergence of EU and state interests

A recent example of convergence is ESA's and the United Kingdom Space Agency's (UKSA) decision to set up a permanent ESA presence at the Harwell Science and Innovation Campus in Oxfordshire, which will be embedded into ESA's International Space Innovation Centre (ISIC). It is proposed that this will "help focus the UK's considerable, but currently fragmented, strength in the space sector, contributing to the goal of doubling the UK space market by 2020." [32] These plans, if successful, are of obvious benefit to British commerce and industry. It meets the UKSA's (formerly the British National Space Centre [BNSC]) first priority – to increase Britain's global

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

space systems, services and applications market share.[33] Recently it emerged that the UK's space sector has significantly grown since 2007, despite the economic troubles.[34] One caveat with Britain, however, is that Euro-Atlantacist tensions may come to the fore again in future.

Already examined above is the French point of view, and how its traditional drives for autonomy, particularly from the USA, is satisfied with current EU space and ESA projects. If we were to take Wæver's opinions on traditional German interests, which are pro-integration, then it is obvious that Germany is generally satisfied. The European Strategy for Space (ESS) is noted by Suzuki for recognising the "legitimacy of national interests and improving their complementary interplay with common (European) interests".[35] By accommodating national interests, the EU has mitigated one of the potential flashpoints that could threaten further European integration and produce fragmentation. Suzuki continues:

"The ESS, motivated by industry, can therefore be seen as policy driven by a... logic of autonomy... [which] appears to be more sophisticated, pragmatic and less provocative, but is certainly shared by the Member States of both ESA and the EU." [36]

The industry 'motivation' can easily be merged with Oikonomou's conclusion that the Commission is creating and manipulating demand for European space industry.[37] The economic rationale coincides with the general European desire for integrated trading and wealth – and that is the very foundation of the European unity we see today. Oikonomou states that debating whether GMES has military applications is unnecessary – it is already decided and obvious that it has such applications. Rather, he believes we should be asking the question "to what extent [is it] part of the broader project of the politico-economic expansion of the EU"?[38] Considering the history of economic union in Europe, we can easily see how the economic rationale of both the EU as a referent object and member states, and this increased integration promotes the security and continued existence of the EU.

Wæver's Third Concept: Another layer of identification furthers security

The debate over EU/ESA integration is well summarised by Thomas Hoerber.[39] The notion of the EU incorporating ESA as an implementing tool is shot down by him because of the inevitable problems of legitimacy and the democratic deficit, if directly brought under the aegis of the EU. The option of having the EU as a member of ESA is deemed by Stephan Hobe to be politically unrealistic.[40] The notion of ESA as the EU's space agency is considered has greater implications for European identity, and for its construction, according to his summary of Peter and Stoffl's previous article in *Space Policy*. [41] Hoerber states that Peter and Stoffl anticipate "future space exploration as a highly symbolic representation of earthly power", [42] yet warns against such competition which has been destructive in the past. As Hoerber states, these 'symbols' and 'gesture politics' can become a focal point when constructing a European identity. Gérard Brachet echoes this by praising GMES as the latest effort to formulate a European identity by forming a common (what he determines as environmental) policy that will apply to all members.[43]

The efforts of creating a European identity is ever present, and self-evident throughout this essay. Particularly with talk of 'autonomy' and capability in a realm which is too large and demanding for any single European state,[44] Europe working together can project a more powerful and significant identity vis-à-vis the other major space powers and actors. Whilst national European identities may take a back seat in space, they still exist, particularly in the case of France as Europe's largest single space spender. However, if *national* or *state* security (and defence) is satisfied with *European* actions and policies in outer space, it can be speculated that *national* identity is not a major factor in this realm, but *European* identity is.

Conclusions: Validity of Wæver's Integration-as-security

Wæver partly furthers this point if we consider a European identity versus American power in outer space. The identity of the security community is a security factor – this is true. European states must feel that the EU and ESA are working for their benefit, whereas the alternative option of dependence on, or 'vassal' status with, the USA is less desirable. As cited above, the drive for autonomy is a process of 'othering', contrary to Wæver's belief that Europe's 'other' is its own past. Furthermore, Wæver states that non-military securitisation is a threat to EU integration. [45]

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

We can easily see the military benefits of space policy. As Wæver attests, security concerns have become aggregated to a European level, but he claims so as to avoid the dark side of Europe's past. Could it be both? The identity being forged in *Europe* is that of a breaking with a (internal) violent past, but also of saying: "We are not vassals to the United States. But we are also not dependent on Russia, or any other power. We want to make our own European stake in the benefits of outer space."

As for the congruence of national and European interests, there is little to argue with against Wæver. However one cannot always take member state support for granted. Hypothetically speaking, if a major disagreement were to divide France and Germany, progress in both policy and projects would be most difficult, given their financial contributions. Also there is still preference among member states to favour projects which provide the most opportunities for their own space industries.[46] Kazuto Suzuki concludes that:

"Losing the balance in policy logics of the bigger and smaller countries, on the one hand, poses the risk that the ESA might split into two parts, or that big Member States will 'go it alone'. But on the other hand, increasing commercialisation in the space market and strengthening of the relationships between ESA and the EU would require a further deepening of collaboration."

This further reinforces Wæver's concept that congruence must be maintained to prevent fragmentation, of not only the EU but also of the greater European identity. To adjust Oikonomou's question above, we should ask: to what extent are ESP and ESA part of the broader project of the politico-economic *integration* of the EU?

Does this make Europe a true referent point of security? The possibilities of integration-as-security are real enough. However the real locations of the deposits of power are not so certain. ESA works so long as it keeps sensitive projects as an option. If ESA was subsumed into the EU, all ESA projects could become mandatory through funding from the EU. The European Commission can only work if no major member state is greatly unhappy with what is being done. So long as the intergovernmental nature of sensitive ESA projects are maintained, with the Commission as a mediator to provide a strategic *European* lens on the issues, Europe can continue to be a referent point of security in outer space affairs. If the Commission were able to make all space projects mandatory through the EU, continued member state support is not guaranteed at all. That would result in a supranational authority taking direct and overt charge over a realm which is essential to defence, power projection, economics and communications. Wæver's concepts, as used here, are largely valid in interpreting ESA and EU activity and policy in outer space. Whilst it is mentioned by Wæver, one should stress more on the warning of not to dismiss the state – Wæver claims that security is 'indivisible', that security on the European level equates to security on the state level.[47] This reinforces the point that the state-level definition of security must be similar, if not the same, as the European-level definition. This perhaps mitigates the validity of his concepts – that Europe may not yet be a true, or complete, referent object because state interests (or policy logics as Suzuki would say) have to be satisfied to keep *Spaceship Europe* in orbit.

Bibliography

Adler E. and Barnett M., *Security Communities* (Cambridge: Cambridge University Press, 1998)

Amos, J. 'UK space sector earnings now at £7.5bn', *BBC News* website, <http://www.bbc.co.uk/news/science-environment-11703446> 8/11/10. (Accessed 8/11/10)

BNSC, *UK Civil Space Strategy: 2008-2012 and Beyond*, <http://www.ukspaceagency.bis.gov.uk/assets/channels/about/UKCSS0812.pdf> (2008)

Bolton, I.R.B., 'Neo-realism and the Galileo and GPS negotiations', in Natalie Bormann and Michael Sheehan (ed.) *Securing Outer Space* (Abingdon: Routledge, 2009)

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

- Brachet, G. 'From initial ideas to a European plan: GMES as an exemplar of European space strategy', *Space Policy*, (Vol. 20, 2004)
- Curtis, J. et al. 'Reviewing UK Space Exploration', *Space Policy*, (Vol. 26, 2010)
- ESA, *Agenda 2011*, (2006), <http://www.esa.int/esapub/br/br268/br268.pdf> pp. 25 (Accessed 31/10/10)
- ESA, 'Funding', http://www.esa.int/esaMI/About_ESA/SEMNQ4FVL2F_0.html, last update 30/1/09 (Accessed 5/11/10)
- ESA, *The European Space Agency*, April 2010, <http://esamultimedia.esa.int/multimedia/publications/ESA-Presentation/pageflip.html> pp. 8 (Accessed 31/10/10)
- ESA, 'New website for PECS launched', News, 25 October 2007, http://www.esa.int/esaMI/About_ESA/SEM8TRVH48F_0.html (Accessed 31/10/10)
- ESA, *Resolution on the European Space Policy*, <http://www.esa.int/esapub/br/br269/br269.pdf>, June 2007, pp. 10-11 (Accessed 02/11/10)
- European Commission, 'European Space Policy', http://ec.europa.eu/enterprise/policies/space/esp/index_en.htm, last update 31/08/10 (Accessed 2/11/10)
- European Commission, *European Space Policy Progress Report*, September 2008, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0561:FIN:en:PDF>, pp. 6 (Accessed 1/11/10)
- GMES, 'Overview', <http://www.gmes.info/pages-principales/overview/> (Accessed 31/10/10)
- Hoerber, T. 'ESA+EU – Ideology or Pragmatic Task Sharing?', *Space Policy*, (Vol. 25, 2009)
- Hoerber, T. 'The European Space Agency and the European Union: The next step on the road to the stars', Research Paper (2009)
- Klein, J.J. *Space Warfare: Strategy, Principles and Policy* (Abingdon: Routledge, 2006)
- McLean, A. 'Integrating European Security Through Space', *Space Policy*, (Vol. 11:4, 1995)
- Oikonomou, I. 'GMES and the making of EU military space policy: Beyond the rhetoric', Paper presented at the 40th UACES Annual Conference, Brugge, September 2010
- Slijper, F. 'From Venus to Mars: The European Union's steps towards the militarisation of space', Transnational Institute briefing paper. (November 2008)
- Slijper, F. 'The EU should freeze its military ambitions in space', *Space Policy*, (Vol. 25, 2009)
- Spacesecurity.org, *Space Security 2010*, (Kitchener: Pandora Press, 2010) <http://www.spacesecurity.org/SS2010.pdf>
- Suzuki, K. *Policy Logics and Institutions of European Space Collaboration* (Aldershot: Ashgate, 2003)
- UKSA, 'Space at Harwell', <http://www.ukspaceagency.bis.gov.uk/10463.aspx> (Accessed 4/11/10)
- Wæver, O. 'European Security Identities', *Journal of Common Market Studies* (Vol. 34:1, 1996)

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

- [1] Suzuki, K. *Policy Logics and Institutions of European Space Collaboration* (Aldershot: Ashgate, 2003) pp. 200
- [2] ESA, *Agenda 2011*, (2006), <http://www.esa.int/esapub/br/br268/br268.pdf> pp. 25 (Accessed 31/10/10)
- [3] Wæver, O. 'Insecurity, security and asecurty in the West European non-war community', in Emanuel Adler and Michael Barnett, *Security Communities* (Cambridge: Cambridge University Press, 1998) pp. 67
- [4] Ibid., pp. 89
- [5] Suzuki, *Policy Logics and Institutions...* pp. 3
- [6] ESA, 'New website for PECS launched', News, 25 October 2007, http://www.esa.int/esaMI/About_ESA/SEM8TRVH48F_0.html (Accessed 31/10/10)
- [7] ESA, 'Funding', http://www.esa.int/esaMI/About_ESA/SEMNQ4FVL2F_0.html, last update 30/1/09 (Accessed 5/11/10)
- [8] ESA, *The European Space Agency*, April 2010, <http://esamultimedia.esa.int/multimedia/publications/ESA-Presentation/pageflip.html> pp. 8 (Accessed 31/10/10)
- [9] GMES, 'Overview', <http://www.gmes.info/pages-principales/overview/> (Accessed 31/10/10)
- [10] Slijper, F. 'The EU should freeze its military ambitions in space', *Space Policy*, (Vol. 25, 2009) pp. 71
- [11] Oikonomou, I. 'GMES and the making of EU military space policy: Beyond the rhetoric', Paper presented at the 40th UACES Annual Conference, Brugge, September 2010, pp. 8
- [12] Ibid., pp. 14
- [13] European Commission, 'European Space Policy', http://ec.europa.eu/enterprise/policies/space/esp/index_en.htm, last update 31/08/10 (Accessed 2/11/10)
- [14] ESA, *Resolution on the European Space Policy*, <http://www.esa.int/esapub/br/br269/br269.pdf>, June 2007, pp. 10-11 (Accessed 02/11/10)
- [15] Slijper, F. 'From Venus to Mars: The European Union's steps towards the militarisation of space', Transnational Institute briefing paper. (November 2008) pp. 19
- [16] ESA, *Resolution on the European Space Policy...*, pp. 24-25. Emphasis Bowen's.
- [17] Ibid., pp. 11-12, 14-15
- [18] Wæver, 'Insecurity, security, and asecurty...', pp. 94
- [19] Slijper, 'From Venus to Mars... pp. 18. Chirac's original quote from Daniel Dombey, 'Chirac calls for space funding to avert vassal status for EU', *Financial Times*, 19 December 2001
- [20] European Commission, *European Space Policy Progress Report*, September 2008, <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2008:0561:FIN:en:PDF>, pp. 6 (Accessed 1/11/10)
- [21] Ibid.

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

- [22] Klein, J.J. *Space Warfare: Strategy, Principles and Policy* (Abingdon: Routledge, 2006) pp. 64
- [23] Curtis, J. et al. 'Reviewing UK Space Exploration', *Space Policy*, (Vol. 26, 2010) pp. 113
- [24] Spacesecurity.org, *Space Security 2010*, (Kitchener: Pandora Press, 2010) <http://www.spacesecurity.org/SS2010.pdf> pp. 13
- [25] McLean, A. 'Integrating European Security Through Space', *Space Policy*, (Vol. 11:4, 1995) pp. 247
- [26] Bolton, I.R.B., 'Neo-realism and the Galileo and GPS negotiations', in Natalie Bormann and Michael Sheehan (ed.) *Securing Outer Space* (Abingdon: Routledge, 2009) pp. 193-202
- [27] Suzuki, *Policy Logics and Institutions...* pp. 196
- [28] Ibid., pp. 197
- [29] Ibid., pp. 196
- [30] Slijper, 'From Venus to Mars...' pp. 41
- [31] Suzuki, *Policy Logics and Institutions...* pp. 197
- [32] UKSA, 'Space at Harwell', <http://www.ukspaceagency.bis.gov.uk/10463.aspx> (Accessed 4/11/10)
- [33] BNSC, *UK Civil Space Strategy: 2008-2012 and Beyond*, <http://www.ukspaceagency.bis.gov.uk/assets/channels/about/UKCSS0812.pdf> (2008)
- [34] Amos, J. 'UK space sector earnings now at £7.5bn', *BBC News* website, <http://www.bbc.co.uk/news/science-environment-11703446> 8/11/10. (Accessed 8/11/10)
- [35] Suzuki, *Policy Logics and Institutions...* pp. 197
- [36] Ibid., p. 201
- [37] Oikonomou, 'GMES and the making of...', pp. 9-13
- [38] Ibid., pp. 14
- [39] Hoerber, T. 'ESA+EU – Ideology or Pragmatic Task Sharing?', *Space Policy*, (Vol. 25, 2009)
- [40] Ibid., pp. 207
- [41] Ibid., work Hoerber cites is: Peter, N. and Stoffl, K. 'Global space exploration 2025: Europe's perspectives for partnerships', *Space Policy*, (Vol. 25, 2009) pp. 30-34
- [42] Hoerber, T. 'ESA+EU...' pp. 207
- [43] Brachet, G. 'From initial ideas to a European plan: GMES as an exemplar of European space strategy', *Space Policy*, (Vol. 20, 2004) pp. 7
- [44] Hoerber, T. 'The European Space Agency and the European Union: The next step on the road to the stars', Research Paper (2009) pp. 1. Hoerber cites Alain Gaubert and André Lebeau, 'Reforming European Space

Outer Space, and Security as Integration in Europe

Written by Bleddyn E. Bowen

Governance', *Space Policy*, (Vol. 25, 2009)

[45] Wæver, 'Insecurity, security, and asecuri...', pp. 70, 98, 102

[46] Slijper, 'From Venus to Mars...' pp. 25

[47] Wæver, O. 'European Security Identities', *Journal of Common Market Studies* (Vol. 34:1, 1996) pp. 119-120

—

Written by: **Bleddyn E. Bowen**
Written for: **Dr Alistair Shepherd**
Written at: **Aberystwyth University**
Date: **2010**

About the author:

Dr Bleddyn E. Bowen is a Lecturer at the Defence Studies Department, King's College London, which is located at the Joint Services Command and Staff College, UK Defence Academy. Bleddyn's research specialises in spacepower theory, classical strategic theory, and modern warfare. Bleddyn has published on spacepower theory and naval analogies, the politics of space debris removal, and EU space strategy.