

THE CONSTITUTIONAL ARCHITECTURE OF EUROPEAN SPACE POLICY: BETWEEN INTEGRATION AND FRAGMENTATION

L'architettura costituzionale della politica spaziale europea: tra integrazione e frammentazione

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Abstract (En): *the article examines the constitutional architecture of European space policy, analysing the structural tensions between integration and fragmentation that characterise the institutional relationship between the European Union and the European Space Agency (ESA). Starting from the legal basis established by Article 189 TFEU, the contribution reconstructs the progressive evolution of EU space competence and identifies the principal structural dysfunctions that currently undermine the relationship between the two organisations: divergences in public procurement rules, asymmetric membership, security-related constraints, the absence of institutionalised coordination mechanisms, and the lack of ESA's financial accountability to the European Parliament. The article further examines the growing interconnection between space policy and the Common Security and Defence Policy, highlighting the tension between the intergovernmental logic that pervades the defence sector and the imperative of a genuinely integrated European approach. Particular attention is devoted to the sustainability of human activities in the aerospace environment – an issue of growing constitutional and regulatory significance that demands a coherent response at the European level. In light of these considerations, the article argues that a significant step change in European space governance is urgently needed, to be achieved through an ever-closer institutional rapprochement between the EU and ESA, culminating ideally in the full integration of the space Agency within the European institutional framework.*

Abstract (It): il contributo esamina l'architettura costituzionale della politica spaziale europea, analizzando le tensioni strutturali tra integrazione e frammentazione che caratterizzano il rapporto istituzionale tra l'Unione europea e l'Agenzia spaziale europea (ESA). Muovendo dalla base giuridica stabilita dall'art. 189 TFUE, il saggio ricostruisce la progressiva evoluzione delle competenze dell'UE in materia spaziale e individua i principali ostacoli strutturali che oggi compromettono il rapporto tra le due organizzazioni: le divergenze nelle regole sugli appalti pubblici, l'asimmetria nella composizione, i vincoli connessi alla politica di sicurezza, l'assenza di meccanismi istituzionalizzati di concertazione e il deficit di *accountability* finanziaria dell'ESA nei confronti del Parlamento europeo. Il contributo analizza inoltre la crescente interconnessione tra la politica spaziale e la politica di sicurezza e difesa comune, evidenziando la tensione tra la logica intergovernativa che pervade il settore della difesa e l'esigenza di un approccio europeo genuinamente integrato. Particolare attenzione è dedicata alla sostenibilità delle attività umane nell'ambiente aerospaziale – profilo di crescente rilevanza costituzionale e regolatoria che richiede una risposta coerente a livello europeo. Alla luce di tali considerazioni, il saggio sostiene che un significativo cambio di passo nella *governance* europea dello spazio sia quanto mai necessario, da realizzarsi attraverso un rapporto istituzionale sempre più stretto tra l'UE e l'ESA, con l'obiettivo finale dell'integrazione dell'Agenzia spaziale nel quadro istituzionale dell'Unione.

Keywords: Space Governance; Article 189 TFEU; European Constitutional Integration; Common Security and Defence Policy; EU-ESA Relationship.

Parole chiave: Governance spaziale; Art. 189 TFUE; Integrazione costituzionale europea; Politica di sicurezza e difesa comune; Rapporti UE-ESA.

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1. Space as a Strategic Asset: Europe and the Rise of the New Space Economy

Never before have space activities attracted such interest from States and various economic actors¹. Outer space is assuming growing importance not only from a technological standpoint, but also, and above all, from an economic one². Indeed, an ever-increasing number of aspects of daily life depend on satellite signals and data, thus stimulating unprecedented investment – often far removed from traditional channels – in space infrastructure. What is occurring is, in other words, a genuine synergistic *cross-fertilization* between terrestrial and space technology domains, made possible by the rapid evolution of technologies that, building on the concepts of *spin-out* (transfer from space to Earth) and, conversely, *spin-in* (transfer from Earth to space), are capable of delivering highly innovative products of both a *space-related* (products enhanced by space) and *space-enabled* (products made possible by space) nature³.

In substance, what is evocatively termed the *New Space Economy* represents an engine of innovation that, by enabling the use of space systems, products and applications across various commercial sectors, can generate enormous financial benefits, propelling the industrial system towards a new economy⁴. This sector has effectively become one of the most powerful drivers of economic growth and one of the central pillars upon which the various industrial supply chains rest – chains that, precisely thanks to space, are able to consolidate their market position and expand their access opportunities⁵. Space thus

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This observation is well established in scholarship; recently: AA.VV., *The Space Economy in Figures: How Space Contributes to the Global Economy*, OECD Publishing, Paris, 2019. On the same wavelength, already, K.H. BÖCKSTIEGEL, *Commercial Space Activities: Their Growing Influence on Law*, in *Annals of Air and Space Law*, Vol. 12, 1987, 175 ff.; H.L. VAN TRAA-ENGELMAN, *Commercial Utilization of Outer Space: Law and Practice*, Martinus Nijhoff Publishers, Dordrecht-Boston, 1993.

² For an analysis of the complex aspects that have affected, and continue to affect, the ‘commercialisation’ of space, reference is made to the still relevant contributions of S. GOROVE, *Space Commercialization: Roles of Developing Countries*, in *Journal of Space Law*, Vol. 17, No. 1, 1989, 66 ff.; B. CHENG, *The Commercial Development of Space: The Need for New Treaties*, in *Journal of Space Law*, Vol. 19, No. 1, 1991, 17 ff.; N. CEDOLA, *Realtà e prospettive di utilizzazione dello spazio cosmico*, in F. FRANCONI, F. POCAR (eds.), *Il regime internazionale dello spazio*, Giuffrè, Milan, 1993, 15 ff.; E.R. FINCH, *Commercial Space Development in Millennium 2000*, in *Journal of Space Law*, Vol. 27, 1999, 161 ff.

³ *Space economy e innovazione. La nuova frontiera dell’economia oltre l’atmosfera terrestre*, available at www.asi.it/space-economy/.

⁴ On the economic potential of the new space industrial sector, see for all: R. HANSEN, J. WOUTERS, *Towards an EU Industrial Policy for the Space Sector: Lessons from Galileo*, in *Space Policy*, Vol. 28, No. 2, 2012, 94 ff.; G. SANNA, *New space economy, ambiente, sviluppo sostenibile. Premesse al diritto aerospaziale dell’economia*, Giappichelli, Turin, 2021.

⁵ In this regard, see U. MONTUORO, *Spazio e diritto internazionale. ‘Frontiere’ dell’impegno italiano in Europa. Attualità della formula italiana dell’intenso rinnovamento*, in *Informazioni della difesa*, no. 6/2014, 14 ff.

ends up permeating the entire global productive structure, well beyond the boundaries of the space sector in the strict sense⁶.

This is, in truth, a reality entering a new cycle of development, with innovative commercial projects promoted by space systems for secure connectivity, Earth observation and navigation. In recent years, there has been a rapid expansion of the *downstream* segment of the *New Space Economy*, focused on the potential of technologies such as telecommunications, satellite television services, geo-spatial products, meteorology and geo-location tools, whose income-generating capacity is often far greater than the initial investments made⁷. But this is merely the beginning of the exponential growth of *New Space*: the global space sector is estimated to generate revenues of at least one trillion dollars by 2040, compared to the current 350 billion⁸.

In this regard, it should be recalled that, although the United States⁹, Russia and China are the world's leading space powers, Europe has now also entered this race to *Outer Space*, having recently begun to channel substantial resources into the space sector through the financing of research and exploration programmes, both commercial and military¹⁰. The European *New Space Economy* thus spans several sectors. Beyond surveillance and security, the industrial supply chain and the telecommunications sector are also of great importance¹¹. Finally, an aspect of considerable significance concerns the economic exploitation of celestial bodies: the Moon, Mars and the numerous asteroids are being analysed as possible sources of rare minerals indispensable for a technologically advanced industry¹².

In short, Europe already possesses the expertise, *know-how* and competitive industrial capabilities that will allow it to develop this spatial potential fully¹³. However, if European States truly intend to claim a substantial share of this expanding sector, they will need to continue investing in space, supporting existing market players while simultaneously fostering the emergence of new significant actors.

⁶ On this topic, e.g., H.R. HERTZFELD, F. VON DER DUNK, *Bringing Space Law into the Commercial World: Property Rights without Sovereignty*, in *Chicago Journal of International Law*, Vol. 6, No. 1, 2005, esp. 81 ff.; R. JAKHU, *The Effect of Globalisation on Space Law*, in S. HOBE (ed.), *Globalisation: The State and International Law*, Franz Steiner Verlag, Stuttgart, 2009, 71 ff.

⁷ Thus, progressively, the Internet of Things (IoT), which, based on wired and wireless networks, allows machines and everyday objects to communicate with each other, is evolving into the Internet of Space (IoS), which relies on the 5G Network, through which it is possible to connect with satellites in Earth's orbit.

⁸ Cf., in *this regard*, www.morganstanley.com/ideas/investing-in-space. In particular, 'New Space' refers to the revolution in approaches to space activities, undertaken by new or existing actors in the value chain, including start-ups, SMEs, mid-cap companies and large system integrators.

⁹ In the United States, in *particular*, there is a veritable 'race' by the private sector to space, with very high-level competitors such as SpaceX, Blue Origin and Virgin Galactic. In this sense M. WEINZIERL, *Space, the Final Economic Frontier*, in *Journal of Economic Perspectives*, Vol. 32, No. 2, 2018, 173 ff. More recently see also S. ANDRISANI, G. DIDDI, *Space Economy: Present and future trends*, in sfclubbocconi.it, 19 March 2021.

¹⁰ Specifically, a massive commercial exploitation of space began in Silicon Valley only a few years ago, creating a veritable New Space revolution that subsequently spread, albeit more slowly, to the various European countries.

¹¹ This is noted by W.B. WIRIN, *The Advent of Commercial Space: Comments on a Joint Venture Agreement*, in *Journal of Space Law*, Vol. 17, No. 1, 1989, 61 ff.

¹² S. HOBE, *Adequacy of the Current Legal and Regulatory Framework Relating to the Extraction and Appropriation of Natural Resources in Outer Space*, in *Annals of Air and Space Law*, Vol. 32, 2007, 115 ff.

¹³ On the financial potential linked to the New Space 'meta-industry', see R. MAURO, *La frontiera della space economy*, in *Pandora Rivista*, 21 May 2021.

Having said this, it must be clarified that, in Europe, institutional support and public expenditure undoubtedly absorb the predominant share of capitalisations in the space sector, though private investments are also present¹⁴. Yet, to stimulate commercial supply in this field, the raising of capital must certainly be improved, requiring action on two fronts: stimulating sufficient public demand and ensuring an accessible avenue for private investors capable of compensating for the assumption of high initial risks and bold innovation initiatives¹⁵.

Against this backdrop, the European Space Agency (ESA)¹⁶ is committed to providing access to its laboratories, infrastructures, operational and data processing centres to the various commercial players in the *New Space* ecosystem – numerous *start-up* companies as well as established industries – with a view to fostering European industrial competitiveness¹⁷. These new forms of cooperation and coordination, realised through the *Business Incubation Centres* (BIC) network¹⁸ and the Cassini initiative¹⁹ in support of entrepreneurship in the space sector, launched by the European Union (EU) in collaboration with the European Investment Bank (EIB) and the European Investment Fund (EIF), represent solutions of capital importance that will be implemented primarily through partnership operations with both large and small industrial actors²⁰.

It is certainly true that European countries have achieved numerous successes in the space sector through innovative technologies, exploratory missions, unique capabilities in geo-observation and meteorology, and world-leading systems for commercial telecommunications²¹. So much so that today Europe occupies second place globally in terms of the size of public budgets dedicated to space. Nonetheless, it will be necessary to ensure the preservation of Europe's autonomy and technological independence in space, given the need to maintain an independent, reliable and cost-efficient access to space activities²².

¹⁴ For some observations in this regard, reference is made to A. HANSSON, S. MCGUIRE, *Commercial Space and International Trade Rules: An Assessment of the WTO's Influence on the Sector*, in *Space Policy*, Vol. 15, 1999, 199 ff.; W.L. ANDREWS, *The Taxation of Space Commerce*, Kluwer Law International, Boston, 2001; K.H. BÖCKSTIEGEL, *Project 2001 – Legal Framework for the Commercial Use of Outer Space*, Carl Heymanns Verlag, Cologne, 2002.

¹⁵ Some indications in this sense in K.H. BÖCKSTIEGEL, *Space Law: Changes and Expectations at the Turn to Commercial Space Activities*, in *Arbitration International*, Vol. 6, No. 1, 1990, 95 ff.; Q. HE, *Certain Legal Aspects of Commercialization of Space Activities*, in *Annals of Air and Space Law*, 1990, 333 ff.; K. TATSUZAWA, *Legal Aspects of Space Commercialization*, CSP Japan, Tokyo, 1992, 24 ff.

¹⁶ On this point see *infra* § 2.

¹⁷ ESA, *This is ESA*, available at www.esa.int.

¹⁸ A 'business incubator' is an economic development tool with the aim of accelerating the growth and success of new businesses, providing support in terms of both resources and services. Cf., in *this regard*, the definition proposed by the NATIONAL BUSINESS INCUBATION ASSOCIATION, available at: www.nbia.org.

¹⁹ The Cassini programme is the European Commission initiative to support innovative companies, start-ups and SMEs in the New Space sector. See EUROPEAN COMMISSION, *Cassini Space Entrepreneurship Initiative*, available at ec.europa.eu/defence-industry-space/eu-space-policy/space-research-and-innovation/cassini_fr.

²⁰ The effectiveness of these measures will be enhanced by the creation of a dynamic network of laboratories throughout Europe, drawing on existing structures within ESA, *such as the Advanced Concepts Team*, the Spaceship initiatives, the ESA_Lab@, technology ambassadors, etc. The Agency thus adopts a global approach to innovation, associating academia, research centres, national space centres, industry and private investors, including venture capital funds.

²¹ EUROPEAN COMMISSION, *Communication from the Commission to the EUROPEAN PARLIAMENT, the Council, the European Economic and Social Committee and the Committee of the Regions. Space Strategy for Europe*, COM(2016)705 final, 26 October 2016.

2. Article 189 TFEU and the Constitutional Dimensions of EU Space Competence

At first glance, the space sector might appear to be a new frontier of regulatory governance, yet the latter dates back to the 1960s, when the United Nations proposed the elaboration of the *Outer Space Treaty*²³ (OST), an international agreement containing the principles designed to govern the activities of individual States in the exploration and use of outer space, including the Moon and other celestial bodies²⁴. Among these general rules are, in particular, the principle of free access to and use of space by all members of the international community, together with its corollary – the principle of non-appropriation of space or celestial bodies – as well as the principles of peaceful use of space, international cooperation, and State responsibility for damage caused by space activities²⁵.

In this regard, it should be emphasised that, although rather dated, the aforementioned codification still represents the fundamental basis of the legal regulation of space activities²⁶. Following this first agreement, with the specific aim of elaborating on certain provisions of the OST, further international conventions – also promoted by the United Nations – came into being, though their success in terms of State adherence progressively diminished²⁷.

Between the late 1960s and the early 1990s, the progressive evolution of space technologies began to make evident the potential – not only scientific but also economic – of space activities²⁸. This was accompanied, however, by growing difficulty in identifying common positions capable of synthesising the needs of the different States of the international community, divided into so-called ‘*launching*

²² Cf. COUNCIL OF THE EUROPEAN UNION, *Council Conclusions on ‘Guidelines on the European contribution to the definition of the fundamental principles of the global space economy’*, 11 November 2020. On the topic see also K.H. BÖCKSTIEGEL, *Space Law Past and Future: The Challenges of the XXI Century*, in *Annals of Air and Space Law*, Vol. 17, 1992, 15 ff.

²³ This is, more specifically, the ‘Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies’, which entered into force on 27 January 1967 and has been ratified by over 100 States. See S. HOBE, B. SCHMIDT-TEDD, K.U. SCHROGL (eds.), *Cologne Commentary on Space Law*, Vol. I, No. VI, Carl Heymanns Verlag, Cologne, 2009, 120 ff.

²⁴ Concerning the codification of space law by means of Treaties and declarations of principles of the UN General Assembly, reference is made to B. CHENG, *United Nations Resolutions on Outer Space: ‘Instant’ International Customary Law?*, in *Indian Journal of International Law*, Vol. 5, 1965, 23 ff.; F. POCAR, *La codificazione del diritto dello spazio ad opera delle Nazioni Unite*, in F. FRANCONI, F. POCAR (eds.), cit., 23 ff. See lastly S. MARCHISIO, *Il Trattato sullo spazio: passato, presente e futuro*, in *Rivista di diritto internazionale*, 2018, 205 ff.

²⁵ On State responsibility for damage caused by space activities, irrespective of whether such activities are attributable to the State or to private parties, see for all M.E. DE MAESTRI, *Attività spaziali e responsabilità civile: il danneggiato come parte debole nell’illecito?*, in I. QUEIROLO, A.M. BENEDETTI, L. CARPANETO (eds.), *La tutela dei soggetti deboli tra diritto internazionale, diritto dell’Unione europea e diritto interno*, Aracne Editrice, Rome, 2012, 269 ff.

²⁶ In this sense F. DURANTE, *La codificazione dei principi sull’esplorazione e l’utilizzazione dello spazio extra-atmosferico*, in *Le droit international à l’heure de sa codification. Etudes en l’honneur de Roberto Ago*, II, Giuffrè, Milan, 1987, esp. 156 ff. Cf. also S. MARCHISIO, *Il Diritto Internazionale dello Spazio*, in *Id. (ed.)*, *Lezioni di diritto aerospaziale*, D’Anselmi Editore, Rome, 1993, 11 ff.

²⁷ Among the principal sources of space law are: the Agreement on the Rescue of Astronauts of 22 April 1968; the Convention on International Liability for Damage Caused by Space Objects of 29 May 1972; the Convention on Registration of Objects Launched into Outer Space of 14 January 1975; the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies of 18 December 1979. For a commentary see C.Q. CHRISTOL, *The Modern International Law of Outer Space*, Pergamon Press, New York, 1982, 12 ff.

²⁸ A. MESSENI PETRUZZELLI, U. PANNIELLO, *Space economy. Storia e prospettive di business*, FrancoAngeli, Milan, 2019, passim. Analogously, already, E.R. FINCH, A. LEE MOORE, *Astrobusiness: A Guide to Commerce and Law of Outer Space*, Praeger, New York, 1985.

States²⁹ – capable of placing a payload into orbital space – and States that, whilst interested in the results of space missions, were unable, due to financial or technological constraints, to conduct their own³⁰.

Faced with an international legal framework that had remained substantially unchanged, and not without certain regulatory gaps³¹, at the European level there began to emerge a growing attempt at sector regulation. Already from the 1970s onwards, and considering the numerous successes achieved by Russian and American space missions as well as the considerable positive impact on European citizens of space-related activities, Europe was seeking a path through which to assume a leading role in a market ‘characterised by high costs and a very high risk of failure’, and as such largely inaccessible to individual European States³².

Initially, given the absence of specific competencies of the then three European Communities in the matter, and the high degree of technical specialisation required to implement space projects, a decision was taken to opt for the establishment of an independent international organisation, to which the mandate of developing European space capabilities would be entrusted: the ESA³³. The European Space Agency, established in 1975, coordinates the space projects of its 22 European member States³⁴, to which are added several States participating in certain projects through specific cooperation agreements. The statutory activities of the Agency are funded by contributions from all its member States, determined on the basis of each country’s gross domestic product; as for the optional programmes, individual States remain free to decide their own participation and level of financial support³⁵.

Not all members of the European Communities were, however, part of ESA³⁶, so that from the early 1990s onwards, the European institutions began, on multiple occasions, to express the need to strengthen the synergies and complementarity existing between the newly established European Community (EC)

²⁹ For a detailed definition of this notion see K.H. BOECKSTIEGEL, *The term ‘launching State’ in international space law, Proceedings of the 37th Colloquium on the Law of Outer Space, Jerusalem, 1994*, 304.

³⁰ This is argued by M.E. DE MAESTRI, *Il diritto dello spazio: vecchi principi per nuove frontiere*, in *UniGe.life*, 29 July 2020.

³¹ A reconstruction of the regulatory context of the space sector prior to the Lisbon Treaty is provided by: M. BENKÖ, K.U. SCHROGL (eds.), *Space Law: Current Problems and Perspectives for Future Regulation*, Eleven International Publishing, Utrecht, 2005; G.H. REYNOLDS, *International Space Law in Transformation: Some Observations*, in *Chicago Journal of International Law*, Vol. 6, No. 1, 2005, 69 ff.; M. LACHS, *The Law of Outer Space: An Experience in Contemporary Law Making*, Martinus Nijhoff Publishers, Leiden-Boston, 2010.

³² So verbatim M.E. DE MAESTRI, *Commentary on art. 189 TFEU*, in F. POCAR, M.C. BARUFFI (eds.), *Commentario breve ai Trattati dell’Unione europea*, CEDAM, Padua, 2014, 1102, who recalls, among the first attempts to guide the action of Member States, two resolutions of the European Parliament and, above all, the Single European Act (SEA), which introduced a specific title dedicated to research and technological development, subsequently amended by the Maastricht Treaty.

³³ On this, cf. the considerations advanced by R.M. BONNET, V. MANNO (eds.), *International Cooperation in Space: The Example of the EUROPEAN SPACE AGENCY*, Harvard University Press, Cambridge, 1994; G. LAFERRANDERIE, P.H. TUINDER, *The Role of ESA in the evolution of space law*, in *Journal of Space Law*, Vol. 22, Nos. 1-2, 1994, 97 ff.; K. MADDERS, *A New Force at a New Frontier*, Cambridge University Press, Cambridge, 1997.

³⁴ ESA Member States are: Austria, Belgium, Denmark, Estonia, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, the United Kingdom, the Czech Republic, Romania, Spain, Sweden, Switzerland, and Hungary. Canada has concluded a long-term cooperation agreement with ESA, while Bulgaria, Cyprus, Croatia, Malta and Slovakia have more recent cooperation agreements. Latvia, Lithuania and Slovenia hold associate member status.

³⁵ Cf. EUROPEAN SPACE AGENCY, *This is ESA*, available at www.esa.int.

³⁶ As will be seen in what follows, there is still no perfect overlap between the European Union and the European Space Agency in terms of their composition.

and the European Space Agency³⁷. The fundamental step in the consolidation of cooperation between the two organisations was taken with the adoption of the Council resolution of 16 November 2000 on the European Space Strategy, which urged the Commission to establish, in liaison with ESA, a joint task force to develop the European space strategy³⁸.

Following the guidance provided in 2002 by the aforementioned task force, in 2004 the European Union and ESA concluded a specific Framework Agreement³⁹ on cooperation in various fields of activity, with the aim of ensuring both the coherent development of a common European space policy and the creation of an efficient basis capable of sustaining mutual cooperation between the two organisations⁴⁰.

Along this trajectory, the ever-closer collaboration between the EU and ESA reached its apex with the Lisbon Treaty⁴¹. Indeed, following its entry into force in December 2009, space was expressly inserted by Article 189 of the Treaty on the Functioning of the European Union (TFEU) among the policies developed by the European Union, acquiring autonomous relevance⁴².

First, this new legal basis provides, in paragraph 1, as the general objective pursued by European space policy, that of 'promoting scientific and technical progress, industrial competitiveness and the implementation of EU policies⁴³. This formulation induces a degree of dependence of space policy upon the other policies of the Union, whilst simultaneously highlighting the high degree of cross-cutting relevance of the subject matter⁴⁴.

³⁷ *Ex multis*, Communication from the Commission, *The European aeronautics industry: meeting the global challenge*, COM(97)466, 24 September 1997; Council Resolution on strengthening synergy between ESA and the EC, C 224/98, 22 June 1998; Council Resolution on developing a coherent European space strategy, C 375/99, 2 December 1999; Communication from the Commission, *Europe and Space: A New Chapter*, COM(00)597, 27 September 2000.

³⁸ Council Resolution on the European Space Strategy, C 371/00, 16 November 2000. For an in-depth analysis of the evolution of the complex relations between the EU and ESA cf., *ex multis*, K.J. MADDERS, J. WOUTERS, *Finding a Genuine Space Policy for Europe*, in *Space Policy*, Vol. 19, No. 1, 2003, 44 ff.; F. MAZURELLE, J. WOUTERS, W. THIEBAUT, *The Evolution of European Space Governance, Working Paper*, No. 25, Leuven Centre for Global Governance Studies, Leuven, 2009, 8 ff.

³⁹ EU/ESA Framework Agreement, 6 August 2004, in OJEU L 261, 64. On the conclusion of agreements by the European Union, for all, S. AMADEO, *Unione Europea e treaty-making power*, Giuffrè, Milan, 2005.

⁴⁰ In this regard, see K.J. MADDERS, W.M. THIEBAUT, *Two Europes in One Space: The Evolution of Relations Between the European Space Agency and the European Community in Space Affairs*, in *Journal of Space Law*, Vol. 20, No. 2, 1992, 117 ff.

⁴¹ For an overview of the changes brought about to the space sector by the Lisbon Treaty, reference is made, for example, to S. HOBE, T. REUTER, *The EU Constitutional Treaty and Space*, in F.G. VON DER DUNK, M.M.T.A. BRUS (eds.), *The International Space Station*, Martinus Nijhoff Publishers, Leiden-Boston, 2006, 125 ff.; J. WOUTERS, *Space in the Treaty of Lisbon*, in *Yearbook on Space Policy 2007/2008*, Springer Vienna, Vienna, 2009, 116 ff.; J. BÉCLARD, *The Lisbon Treaty and the Evolution of European Space Governance*, in *Actuelles de l'Ifri*, The Europe & Space Series, No. 12, 2013, 2 ff.

⁴² This is, without doubt, a cross-cutting area of intervention, which intersects several sectors of activity: from transport to defence, passing through scientific research and industrial policy.

⁴³ For the adoption of measures necessary to achieve the objectives set out in Article 189(1) TFEU, the European Parliament and the Council deliberate in accordance with the ordinary legislative procedure. See U. DRAETTA, *La funzione legislativa ed esecutiva dell'Unione europea nel Trattato di Lisbona*, in *DCSI*, 2008, 677 ff.; R. MASTROIANNI, *La procedura legislativa e i parlamenti nazionali: osservazioni critiche*, in F. BASSANINI, G. TIBERI (eds.), *Le nuove istituzioni europee*, il Mulino, Bologna, 2010, 191 ff.

⁴⁴ This is noted by M.E. DE MAESTRI, *Commentary on art. 189 TFEU*, *op. cit.*, 1102, according to whom the systematic placement of the provision within Title XIX of the TFEU, entitled 'Research and Technological Development and Space', entails that actions taken in the space domain must always be connected to scientific

According to Article 4(3) TFEU, space policy is classified among areas of shared competence, which entails a limitation of EU action to the definition and implementation of space programmes, without the exercise of that competence being capable of preventing Member States from exercising their own⁴⁵. The Union therefore holds, in space matters, a parallel competence *vis-à-vis* that of States, which remains symmetrically vested in Member States even after the institutions of the EU have exercised their own prerogatives⁴⁶.

It should also be noted that, pursuant to Article 189(2) TFEU, where the Union intends to act in the matter, it is not authorised to adopt acts aimed at harmonising or standardising the legislative and regulatory provisions of Member States⁴⁷. This is so unless the specific space activity forms part of a sector of intervention that also encompasses further Treaty provisions, in which case such limitations might in some measure be overcome⁴⁸. It follows that, while the European institutions are called upon to play a decisive role in space affairs, they are nonetheless not empowered to condition in full the policies of individual Member States in this area⁴⁹.

Article 189(3) TFEU, which contains the most innovative provision of the new disposition, finally recognises the necessity for the EU to establish synergistic cooperation with ESA, which therefore remains autonomous. However, the formulation of the provision appears rather generic, limiting itself to providing that ‘the Union shall establish any appropriate relations with the European Space Agency’, thereby leaving open both the possibility of a future integration of ESA within the European institutional framework and of a potential accession of the EU to ESA itself⁵⁰. In any event, the Lisbon Treaty can certainly be credited with having established a rather advanced institutional and political architecture which, by attempting to draw a line of demarcation between space activities conducted under the aegis of the EU and those carried out within the framework of ESA’s own competences, was intended to guarantee the Union a productive collaboration with the European Space Agency⁵¹.

research activities.

⁴⁵ On this, cf. M. CARTABIA, J.H.H. WEILER, *L'Italia in Europa. Profili istituzionali e costituzionali*, il Mulino, Bologna, 2000, 100 ff.; A. ANZON, *La delimitazione delle competenze dell'Unione Europea*, in *Diritto Pubblico*, no. 3/2003, 787 ff.; M. SBRESCIA, *Le competenze dell'Unione europea nel trattato di Lisbona*, Edizioni Scientifiche Italiane, Naples, 2008, passim.; O. PORCHIA, *La sussidiarietà attraverso il riordino delle competenze?*, in *Studi sull'integrazione europea*, no. 3/2010, 631 ff.

⁴⁶ In this sense, M.E. DE MAESTRI, *Commentary on art. 189 TFEU*, op. cit., 1102, who emphasises how, in this area, the absorption and exhaustion of national competences into those of the EU does not occur. Analogously also F.G. VON DER DUNK, *The EU Space Competence as per the Treaty of Lisbon: Sea Change or Empty Shell?*, in *Space, Cyber, and Telecommunications Law Program Faculty Publications*, no. 66/2011, 382 ff.

⁴⁷ *Ibidem*.

⁴⁸ Moreover, the distribution of competences between the Union and Member States must be read in light of the principle of loyal cooperation. For an analysis cf. M. KLAMERT, *The Principle of Loyalty in EU Law*, Oxford University Press, Oxford, 2014, 1 ff.; F. BATTAGLIA, *Il principio di leale cooperazione nel Trattato di Lisbona*, in *Federalismi.it*, no. 19/2020, 23 ff.

⁴⁹ On this point, cf. A. MARTIN, *Galileo: Chronique d'une politique spatiale européenne annoncée*, LexisNexis, Paris, 2009, esp. 89 ff.

⁵⁰ M.E. DE MAESTRI, *Commentary on art. 189 TFEU*, op. cit., 1106. This provision is, on closer examination, comparable, *mutatis mutandis*, to that contemplated by Article 6(2) TEU, which authorises the accession of the European Union to another international organisation.

⁵¹ In this sense V. MAIONE, *L'applicazione delle norme Ue sulla concorrenza al settore spaziale europeo: il procurement per il GNSS Galileo come case study*, in *Revista de estudios jurídicos*, no. 15/2015, 3. Moreover, the distribution of competences between the EU, ESA and their respective Member States represents a vexata quaestio that even the Lisbon Treaty has not been fully able to resolve. On this point see *infra* § 3.

In the framework thus described, mention must also be made of Italy's participation in activities in this rapidly developing sector⁵². Italy currently plays a relevant role within ESA, where it supports a policy of promoting not only the development of innovative orbital infrastructure, but also, and above all, strategic programmes with significant application and commercial implications⁵³. As is well known, Italy's contribution to the 'mandatory' activities and optional programmes of the European Space Agency – channelled primarily through the Italian Space Agency (ASI)⁵⁴ – has become entirely indispensable, to the extent that in 2020 Italy was one of ESA's three main funders, alongside France and Germany⁵⁵.

3. The EU-ESA Relationship: Fragmented Governance and Its Structural Dysfunctions

As has been seen, the European Union is today competent to act in parallel with its Member States in space matters, while at the interinstitutional level it cooperates with the European Space Agency⁵⁶. The EU, in particular, relies on the globally recognised technical excellence of the space Agency, entrusting it with considerable responsibilities in the implementation of its own space programmes, not without delegating to it a large part of its space budget, to the extent that the Union's financial disbursements to ESA have become among the most substantial⁵⁷.

The ever-increasing dependence of the Union on the technical expertise of the space Agency inevitably makes the achievement of a productive collaboration between these two organisations indispensable. Yet this objective risks being severely hampered by the absence of adequate governance of space matters at the European level⁵⁸. Indeed, the new legal architecture linked to the entry into force of the Lisbon Treaty, by redesigning European space policy, has delineated a different and broader spectrum of competences shared among multiple actors. What emerges, in other words, is a sort of 'institutional triangle' composed of the Union's enhanced attributions in the field, the different role played by the European Space Agency, and the changed competences of Member States⁵⁹. In this rather complex framework, the existence of certain regulatory differences found within the legal systems of

⁵² Cf. R. ANCILLOTTI, *L'Agenzia Spaziale Italiana (ASI)*, in F. FRANCONI, F. POCAR (eds.), *Il regime internazionale dello spazio*, op. cit., 343 ff.

⁵³ For further reading cf. R. CAFARI PANICO, *La cooperazione europea in campo spaziale*, CEDAM, Padua, 1983, passim; C. ZANGHÌ, *Cooperazione spaziale europea e normativa comunitaria*, in *Rivista di diritto europeo*, 1992, 527 ff.

⁵⁴ Regarding the legislation establishing the ITALIAN SPACE AGENCY, see *G.U. no. 133 of 8 June 1988*; and, in *scholarship*, G. CATALANO SGROSSO, *Establishment of the ITALIAN SPACE AGENCY*, in *Proceedings of the 31st Colloquium on the Law of Outer Space*, 1988, 162 ff. The ASI has the legal personality of a public-law entity, with a status comparable to that of public economic bodies.

⁵⁵ In this sense see ESA, *This is ESA*, available at www.esa.int.

⁵⁶ *Ibidem*.

⁵⁷ For an analysis of the financial allocation dedicated to the space sector by the European Union, cf. *Council's position at first reading with a view to the adoption of the regulation establishing the European Union Space Programme and the European Union Agency for the Space Programme*, 9 April 2021.

⁵⁸ M. MESSINA, *Quali futuri rapporti tra Unione Europea e Agenzia Spaziale Europea (ESA)?*, in L. PANELLA, F. PELLEGRINO (eds.), *Le nuove frontiere del diritto dello spazio*, Editoriale Scientifica, Napoli, 2018, 94. In the same vein, T. HOERBER, *The European Space Agency (ESA) and the European Union (EU) – The next stop on the road to the stars*, in *Journal of Contemporary European Research*, Vol. 5, No. 3, 2009, 405 ff.

⁵⁹ Cf. U. MONTUORO, *Spazio e diritto internazionale*, op. cit., 15, who notes that 'the States, previously the principal holders, together with ESA, of the commissioning of services, now find themselves constrained within a perspective of necessary coordination, if not virtual subordination, also with respect to the choices made by the individual institutional bodies of the Union'.

the EU and ESA gives rise to considerable structural obstacles which, standing in the way of full coordination between the aforementioned supranational entities, are a source of numerous inefficiencies⁶⁰.

1) A first obstacle is undoubtedly represented by the discordance between the various financial rules, the differing procedures and the different *public procurement* systems⁶¹. All of this gives rise to considerable difficulties, lengthening the timelines of decision-making processes, increasing the cost of programmes and affecting the overall performance of the system. The philosophies underlying the procurement systems of the European Union and the European Space Agency differ: in the EU's space sector, the ultimate objective is the protection of competition law as enshrined in the Lisbon Treaty⁶²; ESA's space policy is, by contrast, oriented towards maintaining and developing the industrial needs of its member States' national markets⁶³. In other words, both procurement systems guarantee forms of competition, but only the European Union's contracting procedures ensure full market competitiveness⁶⁴.

2) A second obstacle may be identified in the asymmetric composition of the two supranational organisations⁶⁵. Indeed, at present, only 19 EU Member States are part of ESA, whilst the United Kingdom, Norway and Switzerland – which are not members of the EU – are members of the latter⁶⁶. Moreover, this asymmetry, when associated with a decision-making system prevalent within the ESA Council⁶⁷ – under which each member State, irrespective of its financial contribution, has one vote and fundamental resolutions are adopted by unanimity – ends up conferring on ESA members that do not belong to the European Union a disproportionate influence over issues that may have considerable repercussions for the Union itself⁶⁸.

⁶⁰ For a more detailed examination of the structural obstacles undermining EU/ESA relations, as identified by the EUROPEAN COMMISSION, see the *Communication from the Commission to the Council and the European Parliament on the establishment of appropriate relations between the European Union and the EUROPEAN SPACE AGENCY*, 14 November 2012, COM(2012)671 final.

⁶¹ 'Public procurement' means the regulated purchase of goods or services by – or on behalf of – a public authority, using public funds. For an analytical treatment of the subject cf. I. PETROU, *The European Space Agency's procurement system: a critical assessment*, in *Public Contract Law Journal*, No. 37, 2007, 197 ff.; S. HOBE, M. HOFMANNOVA, J. WOUTERS (eds.), *A Coherent European Procurement Law and Policy for the Space Sector*, in *Cologne Studies in International and European Law*, Lit Verlag, Berlin, 2011.

⁶² This entails the application of the consolidated EU antitrust legislation. Cf. V. KORAH, *An Introductory Guide to EC Competition Law and Practice*, Hart Publishing, Oxford-Portland, 2007; P. TREPTE, *Public Procurement in the EU, a Practitioner's Guidebook*, Oxford University Press, Oxford, 2007.

⁶³ Moreover, ESA programmes, in the majority of cases, pursue the objective of geographical return, whereas European rules require strict compliance with the principle of the most economically advantageous tender. In this regard, the EU/ESA Framework Agreement of 2004 expressly provides, in *Article 5(3)*, that 'Under no circumstances shall the European Community be bound to apply the rule of geographical distribution contained in the ESA Convention'.

⁶⁴ This is highlighted by V. MAIONE, *L'applicazione delle norme Ue sulla concorrenza al settore spaziale europeo*, op. cit., 19.

⁶⁵ In this regard, see R.A. HARRIS (ed.), *Proceedings of the Third ECSL Colloquium: International Organisations and Space Law: Their Role and Contributions*, Perugia, 1999, 347 ff.

⁶⁶ Without counting, moreover, those States that have concluded bilateral cooperation agreements with ESA.

⁶⁷ The Council constitutes the governing body of the EUROPEAN SPACE AGENCY, *endowed with specific decision-making powers*. The Council elects for a 4-year mandate the Director General of the Agency, who coordinates the activities of each Directorate. Cf. G. MOROSI, *L'Agenzia Spaziale Europea*, in *dirittosenso.it*, 27 August 2020.

3) Furthermore, the fact that ESA counts among its members States that are not part of the EU, already a manifest problem in general terms, becomes even more pressing in matters of Common Foreign and Security Policy (CFSP), which should constitute a prerogative of the Union alone⁶⁹. Specifically, the potential sale of sensitive technologies to third countries could give rise to significant strategic problems for EU security⁷⁰. And this is to say nothing of the fact that the management of classified EU data necessarily implies an increase in the level of complexity of managing the Agency's activities⁷¹.

4) A further structural obstacle is constituted by the absence of institutionalised instruments for policy concertation. This means that space programmes are not necessarily adequate to support the broader political objectives of the European Union and, consequently, ESA's industrial policy objectives can often diverge from those of service delivery of the EU. Indeed, the current framework – namely the EU/ESA Agreement of 2004 – does not possess structural mechanisms ensuring explicit and constant coordination with the development of the more general policies of the Union⁷². Consequently, the forms of cooperation, which must be sought and agreed upon each time in the course of laborious and often exhausting negotiations, do not always guarantee internal consistency between the initiatives undertaken within the framework of ESA and those of the European Union⁷³.

5) Finally, the relations between the EU and ESA are further complicated by one additional systemic obstacle: the absence of ESA's financial accountability to the European Parliament⁷⁴. ESA, as an independent international organisation, has no formal link with the European Parliament, which, by generating an evident democratic deficit, deprives it of the direct relationship with European citizens that every EU policy should, by contrast, enjoy⁷⁵. This is, in truth, a crucial issue, given the magnitude of EU funds managed by ESA and the leading role played by the latter in implementing space programmes⁷⁶.

⁶⁸ So M. MESSINA, *Quali futuri rapporti tra Unione Europea e Agenzia Spaziale Europea (ESA)?*, op. cit., 95, who argues that, at the same time, the European Union could not impose on ESA members not belonging to the Union any duty of loyalty to EU programmes.

⁶⁹ On this point see infra § 4. The Lisbon Treaty, by establishing the European External Action Service, enhanced the competences of the European Union in the fields of security and defence. In particular, Article 27(3) TEU now expressly provides for the establishment of the European External Action Service.

⁷⁰ Cf. EUROPEAN COMMISSION, *Communication from the Commission to the Council and the European Parliament on the establishment of appropriate relations between the European Union and the EUROPEAN SPACE AGENCY*, 14 November 2012, COM(2012)671 final.

⁷¹ For certain sensitive functions relating to security, the European Space Agency might be required to hire exclusively European Union citizens, possessed of the necessary level of security clearance.

⁷² On this point, see the observations of G. VERHEUGEN, *Europe's space plans and opportunities for cooperation*, in *Space Policy*, Vol. 21, No. 1, 2005, 93 ff.; C. VENET, B. BARANES (eds.), *European Identity through Space*, Springer, Berlin, 2012.

⁷³ This situation, particularly concerning from the standpoint of international relations, causes considerable delays in the launch of various space programmes.

⁷⁴ In this sense M. MESSINA, *Quali futuri rapporti tra Unione Europea e Agenzia Spaziale Europea (ESA)?*, op. cit., 95.

⁷⁵ Cf. EUROPEAN COMMISSION, *Report on progress towards the establishment of appropriate relations between the European Union and the European Space Agency (ESA)*, 6 February 2014, COM(2014)56 final. On the role played by the European Parliament in the development of space policy, reference is made to E. SIGALAS, *The Role of the European Parliament in the Development of a European Union Space Policy*, in *Space Policy*, Vol. 28, No. 2, 2012, 110 ff.

⁷⁶ Moreover, the EUROPEAN COMMISSION, as the institution responsible for the implementation of the budget pursuant to Article 317 TFEU, is fully accountable before the European Parliament and the Council for any delays

In conclusion, it is evident that the status quo of the European space sector – characterised by the aforementioned ‘institutional triangle’ involving the simultaneous participation of the European Union, ESA, and, albeit more limitedly, the various Member States (as well as the national agencies of some of them) – ends up giving rise to a peculiar system of *multilevel governance* which, lacking productive coordination mechanisms among the various actors in the sector, certainly does not serve the efficient development of the new frontiers linked to the *New Space Economy*⁷⁷.

4. Space and Security: Intergovernmental Logic versus Common Defence Imperatives

The critical issues connected to the complex European space architecture – marked by an overlap between strategies, initiatives and programmes undertaken at the Union, intergovernmental and governmental levels – produce a considerable impact especially on the development dynamics of the *New Space Economy* as a strategic resource for security and defence applications⁷⁸. The space sector is indeed intrinsically linked to security and defence apparatus to such a degree that, in the industrial domain, it is considered an integral part of the security supply chain, understood in the specific sense of *security from space*, that is, as the capacity to support and guarantee the safeguarding of our planet and all of humanity through the resources of space technology⁷⁹.

In light of the fact that security threats are not exclusively tied to the military dimension, but rather prove asymmetric and undefined, they can no longer be countered simply by recourse to the traditional military instruments employed in the past⁸⁰. Space assets, in this sense, appear capable of ensuring a high level of flexibility and reliability, offering a wide range of integrated applications to address the ever-increasing number of global challenges as well as non-State actors present on the international scene⁸¹. It is, in effect, now undisputed that independent possession of Earth observation (EO) satellite capabilities, telecommunications (SatCom), and navigation and positioning systems, as well as control of the relevant key technologies, is capable of contributing preponderantly to guaranteeing the security of European citizens across multiple dimensions: border controls, maritime surveillance, the fight against international crime and terrorism, conflict prevention and humanitarian crises⁸².

or cost overruns in EU programmes, whilst ESA limits itself to managing them through specific delegation agreements.

⁷⁷ V. MAIONE, *L'applicazione delle norme Ue sulla concorrenza al settore spaziale europeo*, op. cit., 20. For a detailed overview of the current international space governance, cf. S. MARCHISIO, *Setting the Scene: Space Law and Governance*, in L. PANELLA, F. PELLEGRINO (eds.), op. cit., 55 ff.

⁷⁸ This is highlighted by J.P. DARNIS, N. SARTORI, A. SCALIA (eds.), *Il futuro delle capacità satellitari ai fini della sicurezza in Europa: quale ruolo per l'Italia?*, in *Quaderni IAI*, Edizioni Nuova Cultura, Rome, 2016, 13 ff.

⁷⁹ For an in-depth analysis of the notion of ‘security from space’, reference is made to J.P. DARNIS, A.C. VECLANI, V. MIRANDA (eds.), *Space and Security: The Use of Space in the Context of the CSDP*, European Union Institute for Security Studies, Brussels, 2011, 2 ff.; M. PELLEGRINO, G. STANG, *Space Security for Europe*, in *EUISS Reports*, No. 29, 2016, 65 ff.

⁸⁰ See, for example, B.S. LAMBETH, *Mastering the Ultimate High Ground. Next Steps in the Military Uses of Space*, RAND Corporation, Santa Monica, 2003, 27 ff. Cf. also F. TRONCHETTI, *Legal aspects of the military uses of outer space*, in F. VON DER DUNK, F. TRONCHETTI (eds.), *Handbook of Space Law*, Edward Elgar Publishing, Cheltenham, 2015, 334 ff.

⁸¹ Cf. the various contributions in A.C. VECLANI et al., *Space Sovereignty and European Security. Building European Capabilities in an Advanced Institutional Framework*, European Parliament, Directorate-General for External Policies, Brussels, 2014, 1 ff.

⁸² P.L. HAYS, C.D. LUTES, *Towards a Theory of Spacepower*, in *Space Policy*, Vol. 23, No. 4, 2007, 208. Moreover, in recent years the EO and SatCom capabilities have found a growing field of application in the context of security and defence missions conducted by the European Union. See J.P. DARNIS, A.C. VECLANI, V. MIRANDA (eds.),

Nonetheless, requirements of national sovereignty and strategic independence – undoubtedly influenced by the traditional notion of security linked primarily to the concept of territorial integrity of individual States⁸³ – have for a long time led the various European States to develop independent space security and defence strategies and programmes, entirely outside any multilateral context. As a result, space cooperation at the European level remained, for many years, confined to the civilian use of space infrastructure and services, and only timid steps were taken to attempt to provide for shared systems in the field of security and defence⁸⁴.

ESA, as provided in Article 4 of its founding Convention, is bound to the specific mandate of ‘ensuring and promoting cooperation among European States in space research and technology and in their applications for exclusively peaceful purposes’⁸⁵. Consequently, originally, the literal interpretation of the mandate of the intergovernmental organisation, directed towards exclusively peaceful purposes, had seemed to exclude any involvement in the field of security policy⁸⁶. Subsequently, however, ESA itself, during the workshop held in Athens in May 2003, observed that the reference to peaceful purposes contained in its founding Treaty should be read in conjunction with the provisions of the *Outer Space Treaty*⁸⁷, in which that concept refers to uses of space that are simply non-aggressive rather than generically non-military. In this way, the space Agency, through a reinterpretation of its own mandate that led to a *de facto* extension of its attributions, began – albeit cautiously – to assert its capacity to participate in space security policies as well, provided they were non-offensive in nature⁸⁸.

Also within the EU, the interconnection between space, on the one hand, and security and defence, on the other, was not recognised from the outset but developed in an incremental manner, through successive stages which, over the years, led to various political, technological and financial initiatives to promote the development and realisation of satellite infrastructure in support of *security from space*⁸⁹. In this context, the role of the Union progressively emerged, through the activities promoted by the Commission, contributing to extending the perimeter of European space policy so as to encompass even the common security and defence sector⁹⁰.

Space and Security, op. cit., 10.

⁸³ On the sovereignty-security nexus see in depth E.A. IMPARATO, *Sovranità e sicurezza. Un connubio ancora vincente?*, in *Federalismi.it*, special no. 1/2019, 34 ff. More specifically, see S. LABRIOLA, *Difesa nazionale e sicurezza dello stato nel diritto pubblico italiano*, in *Rivista trimestrale di diritto pubblico*, 1979, 904 ff.; P. BONETTI, *Ordinamento della difesa nazionale e Costituzione italiana*, Giuffrè, Milan, 2000.

⁸⁴ J.P. DARNIS, *La New Space Economy: implicazioni per la filiera italiana ed europea e le applicazioni di sicurezza e difesa*, in J.P. DARNIS, N. SARTORI, A. SCALIA (eds.), op. cit., 145, who highlights the strong limitations that characterise the shared space systems established at the European level in the field of security and defence.

⁸⁵ Cf. art. II, *Convention establishing a European Space Agency (ESA)*.

⁸⁶ M. NONES, J.P. DARNIS, G. GASPARINI, S. SILVESTRI (eds.), *La dimensione spaziale della politica europea di sicurezza e difesa*, in *Quaderni IAI*, Istituto Affari Internazionali, Rome, 2002, 18.

⁸⁷ Cf. *Outer Space Treaty*. For a more detailed treatment of the topic, reference is made to I. VLASIC, *The Legal Aspects of Peaceful and Non-Peaceful Uses of Outer Space*, in B. JASANI (ed.), *Peaceful and Non-Peaceful Uses of Space*, Taylor & Francis, New York, 1991, 40.

⁸⁸ See, also for further references, S. CHELI, *Le rôle de l'Agence Spatiale Européenne dans le cadre de la sécurité de l'Europe*, in *Revue Droit et Défense*, no. 1/1996, 1.

⁸⁹ On this topic, S. HOBE, J. NEUMANN, *Global and European challenges for space law at the edge of the 21st century*, in *Space Policy*, Vol. 21, No. 4, 2005, 313 ff.

⁹⁰ From 1988, with the Commission Communication, *The Community and Space, a Coherent Approach* – considered the first real attempt by the European Communities to enter the space sector proactively – the EU's action in the sector has gradually expanded. See N. SARTORI, *Il mercato europeo e le filiere EO e SatCom*, in J.P. DARNIS, N. SARTORI, A. SCALIA (eds.), op. cit., 68.

From this vantage point, the Commission's White Paper on Space, published in 2003, represents the milestone of the process of securitisation of European space policy, insofar as it, for the first time, expressly recognised the security dimension of space and, simultaneously, the spatial dimension of security policies⁹¹. Space technology, infrastructure and services were notably highlighted as capable of providing key support to EU action within the framework of the CFSP and, with it, the Common Security and Defence Policy (current CSDP, formerly ESDP)⁹². These concepts were also reiterated in 2004 by the Council of the European Union in the document 'European Space Policy: ESDP and Space', which emphasised the added value of space activities for security and defence policy⁹³.

In the same year, the progressive involvement of ESA in the Union's strategic planning and space initiatives for security purposes also began. The conclusion of the Framework Agreement paved the way for a more solid cooperation between the EU and ESA, leading to the joint drafting in 2007 of the first European space policy that officially recognised the significant technological overlaps between civilian and defence space programmes, highlighting possible synergies in the field of security⁹⁴. Subsequently, in 2009, following the innovations introduced by the Lisbon Treaty, institutional collaboration was extended to the European Defence Agency (EDA) through the *European Framework Cooperation* (EFC), an initiative proposing the systematic objective of fostering coordination between the research activities and investments of the three institutional actors, with particular attention to *dual-use* technologies for civilian security and military use⁹⁵.

Naturally, the introduction of explicit references to security in the principal strategic documents in the space domain has always been accompanied by concrete efforts on the part of the EU, ESA and EDA to develop the satellite capabilities, technologies and services necessary to maintain a safer Europe within and beyond its borders⁹⁶. The clearest example of such commitment is certainly represented by the Union's two flagship space programmes, Copernicus and Galileo, launched by the Commission together with the space Agency to ensure Europe's positioning in the industrial and technological supply chain within the Earth observation and navigation sectors⁹⁷. To these must be added the initiatives in the satellite telecommunications (*GovSatCom*) and surveillance sectors⁹⁸, as well as the Commission's

⁹¹ EUROPEAN COMMISSION, *White Paper – Space: A New European Frontier for an Expanding Union. An Action Plan for Implementing the European Space Policy*, 11 November 2003, COM(2003)673 final.

⁹² Without being able adequately to account for the literature on the subject, reference should here be made to: L. PANELLA, *La politica estera, di sicurezza e di difesa comune nel Trattato di Lisbona*, in C. ZANGHÌ, L. PANELLA (eds.), *Il Trattato di Lisbona tra conferme e novità*, Giappichelli, Turin, 2010, 341 ff.; F. MUNARI, *La politica estera e di sicurezza comune (PESC)*, in *Il diritto dell'Unione europea*, no. 4/2011, 942 ff.

⁹³ COUNCIL OF THE EUROPEAN UNION, *European Space Policy: 'ESDP and Space'*, 16 November 2004.

⁹⁴ COUNCIL OF THE EUROPEAN UNION, *Resolution on the European Space Policy*, 25 May 2007.

⁹⁵ This Agency, created by Council Joint Action No. 2004/551/CFSP of 12 July 2004, was definitively institutionalised by the Lisbon Treaty. Cf. M. TRYBUS, *The new European Defence Agency*, in *Common Market Law Review*, Vol. 43, No. 3, 2006, 667 ff.; A. GEORGOPULOS, *The New European Defence Agency*, in *Public Procurement Law Review*, Vol. 14, No. 2, 2005, 103 ff.

⁹⁶ N. SARTORI, *Il mercato europeo e le filiere EO e SatCom*, in P. DARNIS, N. SARTORI, A. SCALIA (eds.), op. cit., 74.

⁹⁷ In detail: Copernicus (previously GMES) is the European Earth observation and monitoring programme; Galileo is the EU's Global Navigation Satellite System (GNSS). For an analysis of the centrality of these two space programmes for European defence and security policy, reference is made to R. ROSANELLI, *Le attività spaziali nelle politiche di sicurezza e difesa*, in *Quaderni IAI*, Edizioni Nuova Cultura, Rome, 2011, passim.

⁹⁸ The GovSatCom programme (European Union Governmental Satellite Communications) provides the European Union and its Member States with various communication services based on space technologies, facilitating security- and defence-critical missions and operations.

ongoing support for research and development activities in the space domain. The growing relevance of space for European security policy is finally demonstrated by the indispensable role played by the European Union Satellite Centre (SatCen) at Torrejón (Spain), increasingly active on the operational front, in collaboration with the traditional European institutional space actors. The Centre represents, in particular, an efficient point of acquisition and analysis of satellite imagery with the objective of facilitating and consolidating the decision-making process relating to missions and operations conducted by the Union within the CSDP and, more generally, the CFSP⁹⁹.

As may be noted, the history of the progressive integration of space into European security and defence policy has proceeded in parallel with attempts to strengthen the relationship between the EU and ESA. These are, moreover, two actors both indispensable in the sector: ESA, bolstered by its invaluable reservoir of technical and managerial expertise and experience in managing projects linked to the industrial supply chain, plays a fundamental role in ensuring state-of-the-art space and ground infrastructure; the EU, which constitutes the most significant actor in terms of capacity and resource integration, embodying political responsibility, regulatory competence and harmonisation of industrial strategies, plays a guiding role in the development of technologies, in defining applications and in the provision of space services¹⁰⁰.

And yet, the institutional cooperation between these two European actors, however necessary, appears strongly hampered. If in general terms in the space domain any form of collaboration already proves problematic due to the different institutional architectures of the Union and the European Space Agency, in the specific domain of defence and security policy this becomes even more difficult to achieve¹⁰¹. Defence remains, in fact, essentially a matter of sovereignty, dominated therefore by a national, bilateral¹⁰² or intergovernmental approach, in which the visions of individual States remain entirely predominant, impeding effective decision-making performance¹⁰³. It is no coincidence that, notwithstanding the innovative amendments introduced by the Lisbon Treaty, the CFSP sector and, even more so, that of the CSDP have remained separated from all other areas falling within the Union's attributions and continue to assign a predominant role to Member States, through recourse to unanimous decision-making procedures combined with strong limitations (becoming total exclusion in the case of the CSDP) of the jurisdiction of the Court of Justice¹⁰⁴.

⁹⁹ In this regard, cf. F. BORRINI, *La componente spaziale nella difesa*, Rubbettino, Soveria Mannelli, 2006, 58.

¹⁰⁰ P. MCCORMICK, *Space Situational Awareness in Europe: The Fractures and the Federative Aspects of European Space Efforts*, in *International Journal of Space Politics & Policy*, Vol. 13, No. 1, 2015, 43 ff.

¹⁰¹ F. SLIJPER, *The EU Should Freeze its Military Ambitions in Space*, in *Space Policy*, Vol. 25, No. 2, 2009, 70 ff. On the same wavelength, already, A. CUCURACHI, *Spazio militare: quale futuro per l'Europa?*, in *Informazioni della Difesa*, no. 1/1999, 42 ff.

¹⁰² The bilateral vision that pervades the defence sector was recently confirmed by the conclusion of the Treaty on Franco-German cooperation and integration. For a commentary see G. ALLEGRI, A. DE PETRIS, *Il Trattato franco-tedesco di Aquisgrana*, in *Federalismi.it*, no. 3/2019, 2 ff.

¹⁰³ This is underlined by R. GOSALBO BONO, *Some reflections on the CFSP legal order*, in *Common Market Law Review*, Vol. 43, No. 2, 2006, 337 ff. Also A. RIZZO, *Profili giuridico-istituzionali della politica di sicurezza e difesa comune dell'Unione europea*, in *Il Diritto dell'Unione europea*, no. 2/2016, 301 ff.

¹⁰⁴ P. DE PASQUALE, S. IZZO, *La politica di sicurezza e difesa dopo il Trattato di Lisbona tra Unione europea e Stati membri*, in AA.VV. (eds.), *Scritti in onore di Ugo Draetta*, Editoriale Scientifica, Naples, 2011, 197 ff. On the CFSP as an area of intergovernmental cooperation, see P. BILANCIA, *La Politica Estera di Sicurezza Comune dopo il Trattato di Lisbona*, in *Astrid Rassegna*, no. 3/2010, 3 ff.; E. GIANFRANCESCO, *La politica estera e di sicurezza europea prima e dopo il Trattato di Lisbona*, in *Forum di Quaderni Costituzionali*, 18 April 2011, 1 ff.

In substance, the markedly intergovernmental logic that pervades the entire security and defence sector ends up irremediably conflicting with the necessity for Union States to adopt a common position insofar as the European industrial model, in which the *New Space Economy* is rooted, finds itself competing with international giants capable of adopting industrial strategies free from the constraints imposed by complex European governance¹⁰⁵. It is obvious, therefore, that if the steps towards greater European integration in this domain continue to be slow and uncertain – also due to the inability of EU Member States to resolve the issue of strengthening the European institutions in the sector – a common security and defence policy at the Union level that can truly be called such will be difficult to realise¹⁰⁶. In its absence, however, it will be extremely difficult (if not impossible) for the development of the instruments that should accompany it to materialise, foremost among which are space capabilities¹⁰⁷.

Against this backdrop, a decisive institutional step was taken with the adoption of the EU Space Strategy for Security and Defence, which expressly identifies space as a strategic domain for the Union's security, resilience and autonomous capacity for action¹⁰⁸.

The urgency of these imperatives has since been given even more forceful institutional expression by the White Paper for European Defence – Readiness 2030, which frames a sharp increase in European defence investment and links defence readiness to strategic enablers such as space-based communications, navigation and observation. In the same direction, the subsequent Defence Readiness Roadmap 2030 identifies the European Space Shield as one of the flagship projects intended to achieve defence readiness by 2030¹⁰⁹.

5. Towards an Integrated European Space Architecture: Reform Perspectives and Constitutional Implications

The Council of the European Union and the European Parliament established the EU space programme through Regulation (EU) 2021/696, for which an unprecedented financial allocation was set aside¹¹⁰. Indeed, the Multiannual Financial Framework (MFF) for the period 2021–2027, with a budget

¹⁰⁵ This intergovernmental logic, leaving individual Member States a substantial power of veto, makes it rather difficult to achieve a unity of purpose in foreign and defence policy. Cf. D. ALLEN, *Who Speaks for Europe?*, in J. PETERSEN, H. SJURSEN (eds.), *A Common Foreign and Security Policy for Europe?*, Routledge, Oxford, 1998, 41 ff.

¹⁰⁶ A first, albeit limited, step in this direction would appear to be represented by the recent proposal to establish an EU Rapid Deployment Capacity of at least five thousand personnel, capable of implementing military operations as well as civilian missions within the European Union.

¹⁰⁷ Observations on this point in E. GIANFRANCESCO, *La politica estera e di sicurezza europea. Rilievi costituzionalistici*, in *Rass. parl.*, 2008, 359, who highlights how the process under examination represents an entirely original integration path compared to the past.

¹⁰⁸ See EUROPEAN COMMISSION, HIGH REPRESENTATIVE OF THE UNION FOR FOREIGN AFFAIRS AND SECURITY POLICY, *Joint Communication on the European Union Space Strategy for Security and Defence*, JOIN(2023)9 final, 10 March 2023; COUNCIL OF THE EUROPEAN UNION, *Council Conclusions on the EU Space Strategy for Security and Defence*, 13 November 2023.

¹⁰⁹ See EUROPEAN COMMISSION, HIGH REPRESENTATIVE OF THE UNION FOR FOREIGN AFFAIRS AND SECURITY POLICY, *White Paper for European Defence – Readiness 2030*, 19 March 2025; EUROPEAN COMMISSION, *ReArm Europe Plan/Readiness 2030*, 19 March 2025; EUROPEAN COMMISSION, *Readiness Roadmap 2030*, 16 October 2025. For a critical constitutional perspective on ReArm Europe, see A. GUAZZAROTTI, *Fluidità del soggetto neoliberale e integrazione europea ai tempi del “ReArm Europe”*, in *Costituzionalismo.it*, no. 1/2025, 56 ff.

¹¹⁰ *Regulation (EU) 2021/696 of the European Parliament and of the Council of 28 April 2021 establishing the European Union Space Programme and the European Union Agency for the Space Programme*, published in

allocation of no less than 14.8 billion euros at current prices, provided the highest budget ever in favour of the space sector. This reflects the growing importance that the EU attributes to space activities in addressing the Union's own economic and social challenges, as well as those of its Member States¹¹¹. This is because the shared idea at the European institutional level is that a renewed *Space Economy* – encompassing the full spectrum of space activities – could make a valuable contribution to Europe's industrial and technological recovery, generating numerous positive financial spillovers, promoting technical and scientific progress and fostering the competitiveness and innovative capacity of European industry, through smart, safe, sustainable and inclusive growth¹¹².

The Commission's proposal for the new Multiannual Financial Framework for 2028–2034, still subject to the approval procedure under Article 312 TFEU, confirms and further amplifies this trajectory. By placing defence, security and space within the same financial architecture – notably through the defence and space window of the European Competitiveness Fund – the draft budget tends to frame space policy not merely as an industrial or technological sector, but as a core component of the Union's strategic autonomy and geopolitical resilience¹¹³.

From this vantage point, particular emphasis must be placed on the considerable role played by the space sector in the context of the dual – green and digital – transition, which is to serve as the guiding star for future European strategic financing¹¹⁴. Indeed, space data, which must in any case be subject to the stringent European rules on privacy and cybersecurity, can be usefully deployed across a wide range of sectors, including telecommunications, energy, transport, agriculture, disaster prevention and the fight against climate change¹¹⁵. Europe therefore needs a dynamic space sector in order to address its economic and social priorities, improving the productivity and resilience of the business system throughout the single market¹¹⁶.

In particular, the current drive towards digitalisation can draw innumerable advantages from the emergence of competitive industries in the space domain that transform vast series of *big data* into innovative commercial services, advancing in the field of artificial intelligence and the creation of

OJEU L 170 of 12 May 2021. For an analysis, see G. CHIMIENTI, *Il nuovo programma spaziale dell'Unione europea e l'istituzione dell'EUSPA*, in *Osservatorio sulle attività delle organizzazioni internazionali e sovranazionali*, July 2021.

¹¹¹ J.P. DARNIS, M. NONES (eds.), *L'accesso allo spazio, settore strategico per l'Italia e l'Europa*, in *Documenti IAI*, 6 July 2018, 1 ff.

¹¹² For some observations on economic policy choices in the space sector, cf. AA.VV., *'It's the political economy ...!' A moment of truth for the eurozone and the EU*, in *International Journal of Constitutional Law*, Vol. 19, No. 1, 2021, 309 ff.

¹¹³ See EUROPEAN COMMISSION, *A dynamic EU Budget for the priorities of the future – The Multiannual Financial Framework 2028–2034*, COM(2025)570 final/2, 16 July 2025; EUROPEAN COMMISSION, *Proposal for a Council Regulation laying down the multiannual financial framework for the years 2028 to 2034*, COM(2025)571 final, 16 July 2025. On the allocation of EUR 131 billion to defence, security and space under the defence and space window of the European Competitiveness Fund, see EUROPEAN COMMISSION, *EU budget 2028–2034*, available at commission.europa.eu.

¹¹⁴ It should not be forgotten, moreover, that the enormous impact that the space sector is capable of producing on the labour market (space operations provide over 230,000 jobs in the EU) and, consequently, the capacity of European space programmes to respond to the new strategic challenges of society, including the building of an industry that promotes gender equality and encourages the inclusion and diversity of personnel.

¹¹⁵ Cf. PARLIAMENTARY DOCUMENTATION FOR THE COMMITTEES – Interparliamentary Meetings, no. 51, 13th Conference on European Space Policy, 12-13 January 2021.

¹¹⁶ *Ibidem*.

prototypes of computing and quantum technologies essential for access to new markets¹¹⁷. Space communications, through the systematic introduction of automation, can moreover improve connectivity for Europe's digital society and economy. Satellites are indeed capable of providing effective solutions for connecting businesses and people in remote areas and at sea within the framework of future 5G networks, in which numerous applications and services will require near-continuous connectivity¹¹⁸. In the longer term, the objective will furthermore be to promote the spread of space solutions, integrating them into future strategies concerning, for example, autonomous and connected vehicles, railways, transport and *Unmanned Aerial Vehicles* (UAV)¹¹⁹. A further step in this direction has been taken with the establishment of the Union Secure Connectivity Programme for 2023–2027, designed to develop IRIS² as a multi-orbital satellite constellation aimed at strengthening secure connectivity, resilience and strategic autonomy in Europe¹²⁰.

The contribution that the sector under examination can offer to the *European Green Deal* and to the ecological transition is also certainly not of secondary importance¹²¹. Space missions – drawing largely on advanced technologies in robotics and recycling, the fruit of strong innovations in materials science – are capable of minimising energy consumption, in a spirit of ever-greater environmental sustainability. In this regard, one cannot ignore the potential linked to the use of space services and data in critical areas such as, among others, climate monitoring, greenhouse gas monitoring and environmental monitoring¹²². Space activities may also engage with the problem of waste and debris in space, advancing the technologies necessary to maintain a clean space environment¹²³. On the other hand, major advances in this field are capable of leading to the development of solutions that may subsequently be commercialised to promote the circular economy and efficient resource management, reducing the ecological footprint and contributing to Europe's climate neutrality¹²⁴. These concerns have also been

¹¹⁷ For some practical implications of space research, reference is made to R. ATEM DE CARVALHO, J. ESTELA, M. LANGER (eds.), *Nanosatellites: Space and Ground Technologies, Operations and Economics*, Wiley, 2020, *passim*.

¹¹⁸ On this point, cf. S. MARCHISIO, U. MONTUORO (eds.), *Lo spazio cyber e cosmico. Risorse dual use per il sistema Italia in Europa*, Giappichelli, Turin, 2019.

¹¹⁹ For further reading see U. LA TORRE, *Gli UAV: Mezzi aerei senza pilota*, in R. TRANQUILLI-LEALI, E.G. ROSAFIO (eds.), *Sicurezza navigazione e trasporto*, Giuffrè, Milan, 2008, 112 ff.; A. MASUTTI, *Proposals for the Regulation of Unmanned Air Vehicles use in Common Airspace*, in *Air & Space Law*, Vol. 34, No. 1, 2009, 1 ff.

¹²⁰ See Regulation (EU) 2023/588 of the European Parliament and of the Council of 15 March 2023 establishing the Union Secure Connectivity Programme for the period 2023–2027; EUROPEAN COMMISSION, *Commission takes next step to deploy the IRIS² secure satellite system*, 16 December 2024.

¹²¹ The term 'European Green Deal' denotes a set of policy initiatives promoted by the European Commission with the general objective of achieving climate neutrality in Europe by 2050. Cf. *Communication from the Commission. The European Green Deal*, 11 December 2019, COM(2019)640 final.

¹²² Numerous ESA missions are dedicated to the study of climate, providing relevant information on CO₂ and methane emissions, changes in sea levels and temperatures, sea ice thickness, and land surface temperature. Cf. F. ALBERTI, *La nuova iniziativa europea per lo spazio: global monitoring for environment and security*, in *Quaderni IAI*, Istituto Affari Internazionali, Rome, 2008, 7 ff.

¹²³ This is noted by, among others, H.C. MANSON, *The Impact of International Outer Space Commerce on the Environment*, in *Texas International Law Journal*, 1991, 541 ff.; W. LANG, *Environmental Treaty-making: Lessons Learned for Controlling Pollution of Outer Space*, in J.A. SIMPSON (ed.), *Preservation of Near-Earth Space for Future Generations*, Cambridge University Press, Cambridge, 1994, 165 ff. More recently L. VIHKARI, *The environmental element in space law*, Martinus Nijhoff Publishers, Leiden-Boston, 2008.

¹²⁴ The decisive contribution that space policy can make to the European Green Deal is highlighted in the Council conclusions '*Space for a Sustainable Europe*', adopted by the Council of the European Union on 4 June 2020. These conclusions recall the United Nations guidelines for the long-term sustainability of space activities.

addressed through the EU approach to Space Traffic Management, which seeks to ensure a safer, more sustainable and more secure use of increasingly congested orbital environments¹²⁵.

The sustainability of human activities in the aerospace environment constitutes, moreover, a challenge of growing constitutional and regulatory significance, which transcends the merely technical dimension to acquire an autonomous legal relevance. The progressive congestion of orbital spaces – accelerated by the exponential growth of satellite constellations in low Earth orbit and by the increasing participation of private actors in space activities – poses fundamental questions regarding the allocation of orbital resources, the governance of space debris, and the long-term preservation of a safe and accessible space environment for future generations. These issues have begun to attract increasing attention in legal scholarship, which has emphasised how the sustainability of space activities raises questions of intergenerational equity, shared responsibility and resource allocation that cannot be adequately addressed through the fragmented governance framework currently in place, but demand, rather, a coherent constitutional response at the European level. From this perspective, it has been observed that the constitutional dimension of space sustainability extends beyond the purely environmental sphere to encompass broader issues of democratic legitimacy, the protection of fundamental rights and the governance of the global commons – dimensions that remain, to date, insufficiently theorised within the European legal framework, and which scholarship employing the constitutional law method has only recently begun to explore in depth¹²⁶.

Having said this, it should further be noted that, within the framework of the new MFF, the European Union has also strongly increased investments in technologies for space applications that can provide effective support in achieving the objectives of common security and defence policy¹²⁷. From this perspective, the Council of the European Union and the European Parliament adopted a specific regulation which, providing for a total financial allocation of 7.9 billion euros, establishes the *European Defence Fund* (EDF)¹²⁸. The general objective of the Fund – whose legal basis is represented by the TFEU provisions relating to ‘Industry’ and ‘Research, Technological Development and Space’¹²⁹ – is to strengthen the flexibility of defence supply and value chains, fostering better exploitation of the

¹²⁵ See EUROPEAN COMMISSION, HIGH REPRESENTATIVE OF THE UNION FOR FOREIGN AFFAIRS AND SECURITY POLICY, *An EU Approach for Space Traffic Management – An EU contribution addressing a global challenge*, JOIN(2022)4 final, 15 February 2022.

¹²⁶ V. FAZIO, *Brevi considerazioni sulla sostenibilità delle attività umane nello spazio extra-atmosferico: una prospettiva giuridica*, in *BioLaw Journal*, no. 1/2025, 321 ff. From a constitutional law standpoint, the author observes that the protection of orbital environments may be encompassed within the scope of Article 9 of the Italian Constitution – as amended by Constitutional Law No. 1 of 2022 – and that the principle of openness to international law enshrined in Article 10 of the Italian Constitution may impose upon the national legislature the adoption of provisions sensitive to the international sustainability standards governing human activities in extra-atmospheric space.

¹²⁷ In this regard, the President of the European Commission, *Ursula von der Leyen*, expressly acknowledged the need to ‘ensure the mutual enrichment between the civil, defence and space industries’ and to ‘focus on improving the fundamental link between space, defence and security’.

¹²⁸ *Regulation (EU) 2021/697 of the European Parliament and of the Council of 29 April 2021 establishing the European Defence Fund and repealing Regulation (EU) 2018/1092*, published in OJEU L 170 of 12 May 2021. For some observations, see M. D’UBALDI, *Il Fondo Europeo di difesa: il ruolo dell’Italia*, in *Federalismi.it*, special no. 1/2019, 23 ff.

¹²⁹ More specifically, reference is made to Articles 173(3), 182(4), 183 and 188(2) TFEU.

innovative, research and technological development potential, including that of space origin, at every stage of the industrial life cycle of security and defence products¹³⁰.

To this substantial financial allocation is also closely linked the Action Plan on synergies between the civil, defence and space industries, presented by the European Commission some months earlier and expressly directed, among other things, towards promoting the use of the economic and technological advantages deriving from European financing in the space sector in European defence cooperation projects¹³¹. The underlying idea is evidently to strengthen complementarity and synergies between the two sectors, exploiting the revolutionary potential of new technologies (cloud, processors, cyber intelligence and quantum intelligence) in the aspects common to both space and defence uses – as well as, obviously, civilian use¹³².

Now, to achieve all these ambitious objectives – first and foremost that of a greener, more digital and more secure Europe – it will be necessary to ensure Europe's leadership and strategic autonomy in space, promoting a strong role for it in the sector and increasing European industrial competitiveness¹³³. Coordinated public actions by the EU, ESA and their respective Member States are therefore required, on the basis of their parallel competences and respective responsibilities, which can rely on a simplification of the existing legal framework¹³⁴. These are, in effect, changes that require a new organisation at the institutional level – one that takes account of the transformations underway – and a clear and stable *governance* framework¹³⁵. From this perspective, the proposal for an EU Space Act confirms the persistence of regulatory fragmentation in the European space sector and the perceived need for a more coherent legal framework addressing safety, resilience and sustainability concerns within the internal market¹³⁶.

In short, it is necessary to overcome the identified structural obstacles that currently undermine the relationship between the European Union and the European Space Agency, working towards a progressive alignment of the objectives underlying the space industrial strategy and better political coordination, so as to achieve greater complementarity between ESA's technical expertise and the EU's political weight¹³⁷. In particular, it is considered that the most preferable option – albeit the most difficult

¹³⁰ These are aspects emphasised by J.P. DARNIS, N. SARTORI, A. SCALIA (eds.), *Il futuro delle capacità satellitari ai fini della sicurezza in Europa: quale ruolo per l'Italia?*, op. cit., *passim*.

¹³¹ EUROPEAN COMMISSION, *Communication from the Commission. Action Plan on synergies between civil, defence and space industries*, 22 February 2021, COM(2021)70.

¹³² Moreover, the majority of technologies, infrastructure and services in the space sector (such as the flagship programmes Copernicus and Galileo) are capable of strengthening the capacity of the EU and its Member States to address the growing challenges in the field of security. On this topic, see C. CATALANO, *Italy's Cyber and Space Security Policies*, in *Chatham House Research Papers*, 2014, 26 ff.

¹³³ S. MARCHISIO, *Potential European space policy and its impact on national space legislation*, in AA.VV. (eds.), *Towards a harmonised approach for national space legislation in Europe, Proceedings of the Workshop*, Berlin, 2004, 145 ff.

¹³⁴ The need for a joint EU-ESA approach has been repeatedly emphasised by the leadership of both organisations in several joint statements and conferences on European space policy.

¹³⁵ A. GAUBERT, A. LEBEAU, *Reforming European space governance*, in *Space Policy*, Vol. 25, No. 1, 2009, 37 ff.

¹³⁶ See European Commission, *Proposal for a Regulation of the European Parliament and of the Council on the safety, resilience and sustainability of space activities in the Union*, COM(2025)335 final, 25 June 2025.

¹³⁷ On this topic, cf. F.G. VON DER DUNK, *Towards one captain on the European spaceship – why the EU should join ESA*, in *Space Policy*, Vol. 19, No. 2, 2003, 83 ff.; S. HOBE, *Prospects for a European space administration*, in *Space Policy*, Vol. 20, No. 1, 2004, 25 ff.; B. DE MONTLUC, *What is the state of play in European governance space policy*, in *Space Policy*, Vol. 28, No. 2, 2012, 74 ff.

to achieve – would be to fully integrate ESA into the European institutional architecture, transforming it into a genuine Union Agency¹³⁸. This solution would, indeed, provide the space Agency with an appropriate legal basis in EU law, whilst at the same time allowing it to preserve certain of its intergovernmental characteristics, including the existence of optional programmes – distinct from EU programmes – financed directly by Member States outside the Union budget¹³⁹.

Turning our gaze towards the near future of Italian and European space policy – which now constitute an indivisible whole – the structural challenges identified throughout this analysis make it clear that a significant step change is urgently needed, one capable of bringing greater legitimacy, political accountability and genuine symmetry in the field of defence and security, through an ever-closer rapprochement between ESA and the EU.

Were this to be so, it would confirm the long-standing, yet thoroughly current, admonition of Jean Monnet, one of the founding Fathers of the Union: ‘Europe will be forged in crises, and will be the sum of the solutions adopted for those crises’¹⁴⁰.

Were this not to be the case, the maintenance of the *status quo* would inevitably perpetuate the current inefficiencies underlying the relationship between the European Union and the space Agency, making it impossible to pursue a jointly elaborated space policy capable of truly achieving the ambitious common goals connected to the new Multiannual Financial Framework, envisaged for the benefit of all European citizens¹⁴¹.

We find ourselves, therefore, before a unique opportunity to strengthen, with renewed impetus, cooperation and synergies between these two institutional actors, creating a common framework for the development of a new space policy within an increasingly unified market¹⁴².

¹³⁸ So R. ROSANELLI, *Le attività spaziali nelle politiche di sicurezza e difesa*, op. cit., 93. This option had already been envisaged in the report by Carl Bildt, Jean Peyrelevade and Lothar Späth on the future of the European Space Agency: C. BILDT, J. PEYRELEVADE, L. SPÄTH, *Towards a Space Agency for the European Union. Report to the ESA Director General*, 2000.

¹³⁹ Cf. EUROPEAN COMMISSION, *Report on progress towards the establishment of appropriate relations between the European Union and the European Space Agency (ESA)*, 6 February 2014, COM(2014)56 final. For an analysis of the proposed option, see M. MESSINA, *Quali futuri rapporti tra Unione Europea e Agenzia Spaziale Europea (ESA)?*, op. cit., 96.

¹⁴⁰ J. MONNET, *Mémoires*, Librairie Arthème Fayard, Paris, 1976. For the idea that moments of crisis may constitute the most effective spurs to European legal-constitutional developments, see also E. D’ORLANDO, *La crisi economico-finanziaria e le risposte della Wirtschaftsverfassung*, in G. CERRINA FERONI, G.F. FERRARI (eds.), *Crisi economico-finanziaria e intervento dello Stato*, Giappichelli, Turin, 2012, 289.

¹⁴¹ On this point, among many, G. BIGNAMI, A. SOMMARIVA, *L’economia dello spazio: le sfide per l’Europa*, Castelvecchi, Rome, 2017; T. HOERBER, S. LIEBERMAN, *A European Space Policy: Past Consolidation, Present Challenges and Future Perspectives*, Routledge, London, 2019; B. DOBOŠ, *Geopolitics of the Outer Space: A European Perspective*, Springer, 2019.

¹⁴² See the various contributions in T. HOERBER, T. STEPHENSON (eds.), *European space policy – European Integration and the final frontier*, Routledge, London, 2015.