Shifting articulations of space and security: boundary work in European space policy making

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ABSTRACT

European space policy is currently at a watershed. In 2021, there will be two institutions responsible for European space activities: The EU Space Agency (EU SPA) and the civilian European Space Agency (ESA) founded in 1975. This article investigates how new objectives and governance scheme(s) of European space activities reflect the increasing securitisation of space in Europe. Linking work in critical security studies to the concept of boundary work from science and technology studies (STS) I outline three phases of boundary work – expansion, expulsion and protection of autonomy – that all show how the dividing lines between peaceful and militarised space activities have become increasingly blurred. The conclusion argues that we currently witness a shift in the visions of European integration in space, with ESA remaining outside the EU framework and open to non-EU members while the EU SPA is accessible to EU members only and explicitly dedicated to the use of space for security. As the strategic potential of outer space is likely to grow, the paper offers a critical empirical investigation of the ongoing transformation in European space policy that has significant consequences for how we envision a “united Europe in space”.

1. Introduction

Space programmes reflect changing ideologies of ordering the world, entangling technological choices and strategies to broader configurations of identity and statehood. The many facets of space exploration are thus as much a political as a social, discursive and imaginative realm; a foil on which ideas, norms and identities are projected. While our imagination of space “is constitutive of what already ‘is’, the projection of activities in space as what ‘ought’ to be simultaneously constitutes, produces and shapes socio-political relations and activities on Earth” (Borman and Sheenan 2009, p. 4). Space policies, too, are being shaped by our views, beliefs and expectations about what space as a resource holds for societies. (cf. Al-Rodhan 2012).

European space policy is today at a watershed and visions of what space should hold for (European) societies seem increasingly hard to reconcile: For decades, space was
framed as supporting environmental, economic and scientific policies and interests of European countries with the civilian European Space Agency (ESA) being the main responsible actor. Over the last decade, however, the EU began to see space as a crucial component of European security and defence, particularly concerning the prevalent notions of strategic autonomy and techno-political independence (Fiott 2020).

This study addresses the increasing role of space for EU security policies and how this is reflected by ESA’s institutional transformations. It does so by linking work in critical security studies (CSS), namely the framework of securitisation to the concept of boundary work from science and technology studies (STS). Thinking with these two concepts is productive to analyse how the securitisation of space has taken shape in Europe, and how it discursively plays out through the narratives of ESA interviewees and official EU policy documents.

At the 11th European Space Conference in 2019, then European Commissioner for the Internal Market Elzbieta Bienkowska said: “The U.S. has created a Space Force. We need, on the medium to long-term, a European Space Force (...). We need to set in motion a process to define Europe’s vision for space” (Peck 2019). The idea for a European Space Force came shortly after US President Donald Trump had announced his plans for a US Space Force as a new military branch. Although an EU space force seems far from being realised anytime soon, Bienkowska’s call signals the beginning of a new era in European space policy in which the nexus of space and security has become predominant.

This shift from looking to space for exploration to exploring space for its contributions to security and military operations took place vis-à-vis an increasing European integration in the security and defence sector, including the set-up of new policy instruments. Most notably, the Lisbon Treaty in 2009 provided the basis for enhanced European defence cooperation. It introduced the mutual assistance clause that strengthens EU solidarity in dealing with external threats, providing for the possibility of Permanent Structured Cooperation (PESCO) and paved the way for the establishment of EU Battlegroups (cf. Tardy 2018). In the framework of the Treaty, the European Security and Defence Policy was renamed to Common Security and Defence Policy (CSDP), and which today constitutes the main component of the EU’s Common and Foreign Security Policy (CFSP). The Lisbon Treaty also introduced new EU space competencies over security and space matters and provided the ground for an increased securitisation of space in Europe (see p. 13 of this article).

In 2016, the EU Global Strategy and the European Defence Action Plan (EDAP) furthered the integration of EU security and defence policy by introducing a paradigm shift from an “idealist narrative of a civilian, normative, and transformative power with external ambitions” (Csermtoni 2020, np.) towards a pragmatic and resilient EU that actively addresses internal and external threats. Since then, Europeanisation processes in the areas of security and defense have shaped EU security practices in terms of values, areas and institutional actors involved (cf. Burgess 2009, Christou et al. 2010). As most space technologies are dual-use, e.g. contributing to both civil and military objectives (Naja and Mathieu 2015), this is also reflected in the increasing influence of the evolving European security and defence framework on space, on the purposes and requirements of space programmes, and the strategies and policies of its main actors. (cf. Papadimitriou et al. 2019).
Most notably, the aim to turn industrial defense issues into a European project rather than exclusively national ones and frame them as a driver for European integration resulted in the foundation of a new Directorate-General for the Defence Industry and Space (DG DEFIS) in 2019 and the establishment of a new EU Agency for the Space Program (EUSPA) with a strong security portfolio. From 2021 onwards, EUSPA will be responsible for the European flagship programmes Galileo (European Global Navigation Satellite System) and Copernicus (European Earth Observation Satellite Constellation), as well as for the secure Government Satellite Communication program (GOVSATCOM) and Space Situational Awareness (SSA) activities – in fact, all those European space activities that have a strong security and defence component.

The current reconfiguration of the European space landscape must be understood against the background of its specific set-up and historical development. Rather than a unified approach, multiple different actors and institutions are responsible for European countries’ joint space activities. The major institutional actors are the European Space Agency (ESA) and the European Union (EU) and the national space agencies of the member states. Importantly, ESA is not part of the European Union framework but an international organisation founded in 1975 to coordinate civilian European spaceflight activities in the interest of its (mostly European)\(^2\) member states. The core activities of ESA are the design, development and management of space projects – e.g. human space flight and exploration, space science, earth observation and navigation satellites, launcher development as well as fostering international space cooperation in and beyond Europe, increasingly understood as space diplomacy (Brandenburg and Hoerber 2020).

The rationale on which ESA was founded, was for European states to pool their resources more effectively and develop large-scale infrastructural projects that no single state could have achieved (Crawford and Schulze 1990, Trischler and Weinberger 2005, Hoerber and Stephenson 2016). ESA’s founders aimed at reducing the dependence on US assistance and regulation of emerging joint European space activities by building a European institution for the space community. ESA’s organisational set-up was also strongly influenced by scientists who believed that European research organisations had to avoid collaboration with the military and its restrictive confidentiality practices (Krige 1992, p. 4). This civilian approach became characteristic of the subsequent European integration in space (Sheehan 2009, p. 170, Bonnet and Manno 1994). What is more, ESA’s dedication to civilian purposes only was understood as an integrative feature, as the former war adversaries in Europe were just beginning to rebuild trust again and military cooperation in space was not yet imaginable. The belief that a joint space agency could contribute to peaceful collaboration across Europe and beyond is also enshrined into ESAs convention’s first principle that states:

> The purpose of the Agency shall be to provide for and to promote, for exclusively peaceful purposes, cooperation among the European States in space research and technology and their space applications, with a view to their being used for scientific purposes and for operational space applications systems. (ESA Convention 1975)

However, with the end of the Cold War and the European integration process accelerating, EU policymakers envisioned that ESA should also contribute to European security strategies and policies and, eventually a more assertive role of Europe in a changing
global context. As the second major player, the EU became involved in space politics at the end of the 90s and unlike ESA, addresses space technology and applications from an instrumental, political angle, intending to use their potential to further EU core policies in the fields of security and economy (Hoerber 2016, Hoerber and Stephenson 2016, Remuss 2018). Over the last decade, the EU has acted as ESA’s “customer,” commissioning and funding the Galileo and Copernicus satellite constellations for navigation and Earth observation (Antoni et al. 2020). In particular, since the Lisbon Treaty, the EU became ever more dominant in determining the direction of European space activities, in particular concerning space security.

Yet, notwithstanding long-term harmonisation efforts among its main players, European space governance has so far been captive to an “institutional triangle, simultaneously comprising national, intergovernmental and communitarian approaches” (Aliberti and Lahcen 2015, p. 13). While previously, the relations between ESA and EU as well as between space for science and space for security have been negotiated with varying degrees of proximity and distance, the institutionalisation of a new EU Agency for the Space Program (EUSPA) provides a watershed moment that raises questions about the duplications of efforts as well as normative questions about what space should hold for Europe.

The article unfolds as follows: First, it provides a review of contemporary debates on space security in Europe. Second, it introduces the concept of securitisation and the notion of boundary work to understand how dividing lines between peaceful and militarised space activities have become increasingly blurred due to the enhanced focus on space security by the EU. Empirically, this research draws on twelve semi-structured, qualitative expert interviews with ESA staff and European space policy experts conducted in 2019 as well as an extensive document analysis that spans a timeframe from 1994 to 2020. Analytically, I focus on policy narratives employed by ESA and in EU policy documents and outline different phases of boundary work – expansion, expulsion and protection of autonomy. In the concluding section, I argue that the boundary work regarding space and security has implications not only for the relations between ESA and the EU, but for the idea of a united Europe in space more broadly: What started as a vision of peaceful cooperation and the harmonisation of resources for large infrastructure projects has now been complemented and increasingly replaced by a vision of increased synergies between civil and defence-related space application and space as a realm of EU security.

2. State of the art

Much has been written on the nexus of space and security, particularly on the US’s programmes and strategies (Hayes and Lutes 2007, Johnson-Freese 2007, Moltz 2008). Recently, Bowen’s (2020) “War in Space”, added a Clausewitz-inspired space-power theory to growing discussion of space and defence, warfare and militarisation, urging researchers in international relations to pay more attention to the importance of space power for geopolitics. However, it does not attend to understanding the historical trajectories or current situation of space (security) policy in Europe: Europe is increasingly shaped by ceaseless efforts to balance internal tensions and to (re)position itself as a powerful actor in a changing world order (Balibar 2009, Manners and Whitman 2016); efforts that culminated in the notion of the “Security Union” and affect many sectors,
including space policy. Yet, compared to fields such as counter-terrorism, migration management and border security, the space sector has long been overlooked as a site of EU security policies and a topic of social science research on security alike.

This has recently started to change, and the increasing political interest in global space security is reflected by an emerging body of (mainly policy-oriented) literature on this topic. For instance, the Handbook on Space Security by Schrogl et al. (2020) offers an insightful overview of global space security activities, policies, regulations and technology development, including the development of the WEU’s space security culture (Kolovos 2020). The authors provide a useful definition of space security as “the aggregate of all technical, regulatory and political means that aims to achieve unhindered use of outer space from any interference as well as aims to use space for achieving security on Earth” (Schrogl et al. 2020, p. 11). Yet, while offering valuable insights on the global space security landscape and the burgeoning role of space as a domain of European integration, the handbook is less interested in conceptual understandings. Others have shown how the EU can be seen as a securitising actor par excellence, with an ever-increasing range of activities deemed as issues of space security that demand new and intensified levels of regional cooperation (Peoples 2011, p. 206), and argued that the new security dimension of space calls for a re-definition of the institutional arrangements of European space policy, including a new role for ESA (Suzuki 2003, Peter 2005, Peoples 2011, Naja and Mathieu 2015). The edited volume by Hoerber and Forganni (2020) has addressed the growing security discourse in European space policy-making and pointed to the significance of European integration in space. This valuable and timely collection is amongst the first to examine the emerging intersections of security issues and space policy in Europe and calls for more in-depth investigations of how the EU engages in defence and security matters and the impact of institutions on the policy-making process in European space policy to understand the historical, political, economic, legal and social contexts of European space activities.

In a similar vein, Antoni et al. (2020) have argued that the rising challenges for Europe’s security as relying on space infrastructures for navigation, observation as well as autonomous access to outer space have led the EU and ESA to take a more active stance towards security and defence (Giannopapa et al. 2018, Tortora and Moranta 2020). Yet, the question of how the growing securitisation of space is reflected within ESA and affected institutional transformations has received comparably little attention. A valuable exception is Sheehan’s (2009) work on the militarisation of the European space programme that explores how Europe has taken a series of crucial steps towards creating the framework for a European military space capability since the beginning of the twenty-first century. Sheehan argues that the militarisation of the European Space Agency is a development of historical significance given the long-time policy taboo against space militarisation. Extending his line of argument, the present article adds to this growing body of literature concerned with space security by employing the lens of securitisation as developed in critical security studies (CSS).

Although rarely dealing with space security, scholars in CSS offer valuable conceptual insights into how security concepts and practices transform, expand, and adapt to new empirical environments (Rychnovská 2017). Research in this strand has suggested moving away from the dominant focus in European studies and international relations on the effectiveness of EU security policies and instead attend to the social and discursive
practices employed by EU actors to legitimise the increased engagement in security activities and military missions. (Bigo 2002, De Goede 2008, Huysmans 2011, Aradau 2018). One of the key topics to which CSS has attended is how political rhetoric and governmental practices traditionally associated with security politics, have been increasingly brought to other social spheres (Christou et al. 2010). Others have shown how the language of security and the political threat construction can shape national interests, as well as political identities and geographies of power (Buzan and Waver 2003, Booth 2005, Hansen 2011, Newman and Williamson 2018).

For this article, I operationalise the framework of securitisation by drawing on the three analytical dimensions suggested by Christou et al. (2010). First, they recommend attending to how something is framed as a security issue, the actors involved and the security logic that was constituted or legitimised. (Christou et al. 2010, p. 353). Second, to focus on governmentality and governance to trace the practices and transversal processes through which security issues are managed and attend to the constitution of institutions and instruments that resulted from EU security logics. Lastly, Christou et al. (2010) ask how a specific EU security logic is sustained and operationalised through interactions with other institutions, thus acknowledging the EU’s influence as a security actor on other organisations (such as ESA) and how these respond to the EU’s narratives.

To better understand the specific ways in which the EU emphasis on space as being crucial to European security integration is reflected by ESA, and the institutional reconfigurations to which this led, I propose to link the insights on securitisation to the concept of boundary work (Gieryn 1983, 1999, 2001). Boundary work attunes us to how organisations and institutions establish boundaries to protect epistemic autonomy, prestige, and control of resources (Zietsma and Lawrence 2010). Boundaries can be understood as zones of action, sometimes even conflict, as groups engage in boundary work to defend and justify the logic behind the boundary that separates them (Gieryn 1999, Battilana 2011, Bucher et al. 2016). Initially developed in the context of science studies, Gieryn argued that no essential definition of “science” exists, but that it is instead an ongoing process of struggles between different actors or institutions about its continually changing meanings (Gieryn 1999). I propose that the same holds for security, a term that “enables and conceals a diverse array of governing, budgetary, as well as political and legal practices, social and cultural values and habits” (Valverde 2011, p. 90). Security can be a necessary condition (Burgess 2009), or a “pathological tendency that potentially undermines what it was set to protect” (Neocleous 2008, Beauchamps et al. 2017) or more simply as a means of government (Foucault 1979).

Boundaries of security are, therefore mobile and react to new conditions, whether these are already materialising, imagined or strategically staged (Hilgartner 2000). In that sense, European security takes its very meaning from what is – at a specific moment in time – a shared understanding of what both Europe and security are and what they are not. In the remainder of this article, I will explore the securitisation of space in Europe by thinking through the mechanisms of boundary work – expulsion, expansion and the protection of autonomy (Gieryn 2001).

Expulsion-based boundary work refers to the efforts of removing actors and practices that are deemed unacceptable to a certain community. From the opposite direction, expansion entails the inclusion of individuals sets of beliefs or political practices. Yet, expansion does not per se mean the accession into a specific collective or paradigm by
what was previously outside of it, but also includes the incorporation of new fields and activities into existing practices. Lastly, the protection of autonomy is a form of boundary work that, different to the previous two, pertains to efforts to hold existing boundaries stable and prevent them from becoming porous (Carlson 2016, p. 3). What is essential is that underlying every form of boundary is a set of beliefs of legitimacy and authority that allows actors to either incorporate, exclude, or distinguish themselves from what lies outside a specific boundary.

3. Material and methodological approach

The article builds on 12 interviews which were conducted between 2019 and 2020 with European space policy experts, comprising members of ESA and EU space policy experts. In addition, I participated in four leading EU space policy conferences between 2015 and 2020. Given the topic’s sensitivity and the fact that the process under study is still unfolding, all interviews have been anonymised. However, much of the process has been well-documented in official EU policy reports, EC communications and regulations that are publicly accessible and representative of the broader narratives about the increasing role of space for security and the relation of ESA and the EU. Therefore, in addition to the interviews, an extensive policy document analysis was conducted to trace the discursive boundary work concerning the different field positions. The documents span a timeframe from 1994 to 2020 and include regulations, framework agreements between the EU and ESA, workshop protocols, White Papers, commissioned studies on the participation of ESA in security-related activities, official EU strategy documents, EC communications and fact sheets on security-related services, such as Galileo and Copernicus. Such documents offer a particularly interesting way to understand how actors negotiate their positions by creating and distributing official documents as “struggles around boundaries are likely to become increasingly common and be played out through texts” (Thomas and Hewitt 2011, Bucher et al. 2016).

The material has been analysed using a narrative analysis approach (Czarniawska 2004). Narratives are understood as “visible manifestations of policy beliefs and the outcome of political strategizing” (Miller 2020, p. 2); a resource used by actors and institutions to maintain or deconstruct certain ideas, beliefs and boundaries through discourse (Gottweis 2002). For this article, I mobilise narratives to understand how broader European security concerns have been increasingly tied to space and how, in turn, narratives about ESA’s purpose began to change.

4. Shifting articulations of security

4.1. Prelude: the arrival of the second captain on the European spaceship

With the end of the Cold War, and the beginning commercialisation of space technologies in the US discussions started among EU space policy and industry actors about the risk of falling behind. Private investments into the US space sector, it was expected, would spur innovation to an extent to which an international organisation like ESA could not keep up (Remuss 2018, Sheehan 2009). For this reason, the EU started to invest in space activities conducted by ESA. According to a senior staff member at ESA, this was met by a certain
amount of suspicion at the agency that had so far been the only captain on the European spaceship (IP1).

When ESA was founded, the interviewee stated, there “was no European Commission! So, when the EC started looking at space, they didn’t even know what space was until then” (IP5). It was a frequently repeated narrative among interviewees that the EU’s involvement had been a rather unnecessary interference into the daily business of ESA.

However, while the arrival of a “second captain” (von der Dunk 2003) might not have led to a warm welcome by everyone at ESA, the EU became its biggest customer – nothing trivial given that space is one of the most expensive sectors of scientific-technological projects. (Alvarez 2020).

4.2. Boundary expansion I: Galileo merging science and politics

The first attempt of a jointly developed space infrastructure by both organisations was the navigation satellite constellation Galileo. For the EU, Galileo had been driven by worries that Europe would be overly dependent on the US American Global Positioning Systems (GPS), with user requirement standards and certification schemes for the security-relevant equipment being set outside of Europe (EC Communication 1994). EU policy-makers had just made the experience of what techno-political dependence means for decision-making processes in conflict situations: During the Balkans conflicts in the 1990s, US authorities denied European actors access to US satellite data of conflict regions. As Darnis et al. (2020) have argued, this was a “wake-up call for Europe” in many different ways: not only was an armed conflict taking place on European soil after decades of peace, but satellite capabilities for data gathering and communication could be easily disposed of by the US and Europe was lacking its own.

Space technology was now seen as critical enabling infrastructure for defence, leading several EU members to increase or create space capabilities also for security and military usages. Most notably, after the Balkan wars, “space for security” had emerged as a powerful paradigm in EU space policymaking (Darnis et al. 2020, p. 4).

However, the different actors involved in setting-up Galileo began to draw boundaries around its security and military usage. Galileo is owned and funded by the EU, but designed and operated by ESA. Despite its technopolitical legacy, Galileo is defined as “a civil program under civil control” which does, however, not exclude military usages of its encrypted regulated service (Hoerber and Stephenson 2017). According to the EC, Galileo, “constitutes sensitive infrastructure, the deployment and usage of which are susceptible to affect the security of the European Union and its Member States” (EC 2014). As a form of doing techno-politics – “the strategic practice of designing or using technology to constitute, embody, or enact political goals” (Hecht 1996, p. 15). Galileo and European (space) security were now much more closely tied to visions of European integration in a changing world. In addition, space development was now framed as “the concrete translation of a common democratic European political project”, with applications like Galileo being “directly linked to Europe’s role in the world” (Giegerich 2007). Galileo was seen as a collaboration between the EU’s political interests in using space for security and ESA’s scientific and technical expertise in the field of navigation, and it laid the foundation for ESA’s involvement in military space activities and subsequent boundary work. Interestingly, both actors framed Galileo’s purpose in different ways.
The EU emphasised that Galileo as a “European system for European citizens” would give “Europe freedom in its security missions” (Darnis et al. 2020). In turn, ESA aimed at downplaying the crucial military components of Galileo in public accounts and instead stressed the benefits for the general public, such as environmental protection and its use for science (Slijper 2008, p. 40).

Yet, the experiences from collaborating with the EU on Galileo and the subsequent need to adapt to EU security regulations when handling classified information started a long and controversial process of “institutional soul-searching” (IP2) about ESA’s involvement in military and security-related space activities. Several debates were held at ESA’s ministerial Space Council – the forum where ESA members meet to discuss the agency’s future direction – about the questions whether ESA’s mission and the vision of its founding fathers of an exclusively peaceful organisation for space would be compromised by taking part in military-related European space activities (IP 4; IP 12; cf. Sheehan 2009). A senior ESA employee remembered that it was a “very tough discussion in the mid-2000 when the question (of security tasks) was formerly raised in the Space Council: What does exclusively peaceful mean in the convention?” (IP8).

4.3. Protection of autonomy: security should pose (no) problems

In this debate on where to draw which boundaries concerning ESA’s partaking in security and military space activities, the agency’s director-general commissioned a group of “Wise Men” to explore these questions further (Bildt et al. 2000): The former Swedish prime minister Carl Bildt, the then-president of Credit Lyonnais, Jean Peyrelevade, and Lothar Späth, the CEO of Jenoptik AG, a major German Arms and Space company, concluded that ESA should evolve into an organisation capable of developing both civilian and military flight hardware to ensure that space would and could be part of the evolving common European foreign and security policy (Hobe et al. 2006, p. 540). In the words of Bildt, this was just “logical” and “should pose no problem” (Slijper 2008, p. 34). Interestingly, the group of Wise Men represented the fields of politics, economy and industry, but not science or engineering – the major pillars of ESA’s work. This is also reflected in an article which appeared in the magazine Science on the report, and that summarised the findings as follows:

Space is too important to Europe to be left to scientists alone, according to a report on the future of the European Space Agency (ESA) (that) concludes that better coordination between ESA and the business and defence sectors is essential to Europe’s development. (Watson 2000, p. 1287)

This statement also highlights what was seen as necessary boundary work, namely that it was less a question of whether ESA should build different space technologies for security usage, but rather if their intended use by EC agencies in fields such as border security or defence policy could be aligned with ESA’s mission statement. More precisely, it was a question of legitimacy – what were legitimate “security tasks” to which ESA could contribute to? And it was, according to an interviewee who was involved in the process, a wicked question: The boundaries between military and civilian space Earth observation satellites, for instance, was blurry from the outset (IP5; cf. Neufeld 2018). The operation of navigation and communication satellites was already overlapping with more traditional defence
activities – such as using encrypted satellite communication during military missions, so “that one could not be achieved without the other” (IP4, cf. Peter 2005, p. 290). Another interviewee reflected on this process of negotiating institutional boundaries by stating that the pressure on ESA to stay “relevant” in the changing European space-scape and vis-à-vis a more active EU gradually increased with the number of commissioned reports. At a certain point, he mentioned, “it was then more or less accepted by the ESA leadership that security-related aspects could be dealt with, but no armament and arms procurement, and nothing aggressive of course” (IP 5).

The involvement of the military in European space activities – even if only through the backdoor – was not what ESA’s founders had envisioned for the agency (cf. Sheehan 2009), yet ESA’s boundaries as a civilian organisation were set in a different period of European integration and global political orders (Slijper 2008). When asked about his opinion on that, a senior ESA member told me: “Well, then the founding fathers should have been clearer about what they meant with exclusively peaceful!” (IP8). This statement points to the core of expansionist boundary work at ESA regarding its involvement in military-related activities, that is, the dynamically changing interpretation of the first paragraph of its convention that eventually allowed ESA to “move into policy areas previously denied” (Sheehan 2009, p. 32).

4.4. Boundary expansion II: “Space has a security dimension, and security has a space dimension”

The securitisation of space in Europe was further spurred by adopting a White Paper on European Space policy in 2003 by the EC. The paper’s title “Space: A New European Frontier for an Expanding Union – an Action Plan for Implementing the European Space Policy” (EC 2003) signals that while space might be a new frontier for the EU, it is a call to action to implement one European Space policy instead of aligning what have so far been multiple policies. What is particularly interesting here is how the paper strategically uses expansion as a mechanism of boundary work by calling for all stakeholders

...to mobilise behind new goals and to rise to new challenges as the time has come to place (space activities) on the Union’s political agenda and at the heart of the European construction process by putting space applications linked to inspirational goals at the service of the enlarged Europe. (EC 2003, p. 5)

For the first time, space is now fully recognised as a horizontal policy of the enlarged European Union to “support the Union’s key policy goals”: economic growth, sustainable development, or stronger security and defence.

Linking the need for further European integration to the objective of securing Europe’s strategic independence by maintaining autonomous access to space, the paper stated what later became a common saying: That “space has a security dimension and security has a space dimension” (EC 2003, p. 19). The White Paper can thus be understood as a form of boundary work par excellence: It includes, first, novel political practices – the implementation of a single European Space Policy. Second, we see the accession into a particular collective (the space sector as dominated by ESA) or paradigm (that space activities in Europe are civilian) by what was previously outside of it (the European
Commission). Lastly, it shows how new fields and activities (space for security and defence) get incorporated into existing practices.

What is more, the White Paper directly links the envisioned European integration in space to the broader project of European political integration. It does so by framing space as a catalyst of European integration that preserves the security of the EU and mentioned space security technologies as providing “a linchpin of European policy” and contributing to the building of an “EU political project” (Silvestri 2003).

As one interviewee stated about the White Paper, it seemed that if Europe was to be further integrated through common security policy, then ESA had to be part of that, too (IP 1, cf. Sheehan 2009). The White Paper postulated that “Standing still is not an option” for the European space sector (EC 2003, p. 21), urging ESA to expand its boundaries towards more security-related space activities while simultaneously challenging the agencies’ autonomy. This process intensified with the framework agreement of 2003 between the EC and ESA as a strategic partnership between the supply-side of space systems (ESA) and the demand-side for space systems (the EU). The agreement established the Space Council that merges the Council of the EU and that of ESA at the ministerial level (cf. Reillion 2017). As a coordination forum, the Space Council has the mandate to provide broader political views to the formulation of space programmes and to deepen their security aspects (cf. Pasco 2009). Therefore, both the Framework Agreement and the Space Council can be seen as attempts to reorder the messy European space-scapes once more by drawing boundaries line between ESA’s and the EU’s responsibilities and tasks.

When the Lisbon Treaty entered into force in 2007, the EU reinforced3 its aim to become the “natural point of reference for a European space policy driven by demand” (EC 2003, 36). On a broader level of EU policy formation, the Lisbon Treaty confirmed the European Union’s commitment to the progressive framing of a common Union defence policy mainly through the so-called space clause that gave the EU a space competence and the possibility to develop and implement an industrial policy in the space sector. However, while this is often discussed as a novelty with fundamental consequences, von der Dunk (2011) has argued that this competence is rather formalising practices of jurisdiction regarding outer space activities which the Union had exercised since the 2000s, albeit in a somewhat “accidental” fashion. An ESA senior staff member describes the process of boundary expansion by the EU follows:

So typically, the EU does the following; It has a treaty which defines its perimeters and from day one after adopting this Treaty, they transgress their boundaries and try to grab the next piece. And they do so until de facto they have it, and then the following Treaty comes and more or less puts that into a legal text what has already been done in practice. (IP7)

ESA, according to the Framework Agreement of 2003, should formally become the implementing agency of the Union. As such, ESA would have to integrate into the EU framework and modify its convention accordingly – a step that was seen as having profound consequences for those ESA member states that are not members of the EU (von der Dunk 2011). What is more, ESA interviewees saw this as an unnecessary multiplication of actors responsible for space, as plans had already been circulated that the EU is eventually planning to set up its space agency.

At the latest with the Lisbon Treaty, this “arm twisting between two organisations that are different in membership, are different in scope but responsible for space” started (IP1).
A result of such “arm twisting” was the European Space Policy (ESP) that ESA and the EC jointly adopted in 2007. Although celebrated by both as a milestone achievement, the ESP covers the same priorities as previous regulations and communications, except for a stronger focus on security while maintaining the peaceful exploration of outer space. Thus, it is consistent with the securitisation framing of previous documents that all emphasised the need for increased synergies between the space sector’s civil and defence communities. However, seven years later, we see an interesting shift in the ways that ESA leadership extends the boundaries of the agency in public representations. In 2014, following a cooperation agreement with the European Defence Agency to “better support Europe’s security and defence needs” (ESA DG), the then Director-General of ESA was asked in an interview if he foresees a militarisation of space in the next decade. Departing from the principles on which ESA was founded and which had been at least publicly rehearsed and stabilised for many decades, he stated:

(...) as concerns military space activities, this represents so far the largest deficit of Europe as compared to other space powers (...). However, there is an increasing number of programs that, even though civilian, may have military or security-related users – such as Galileo or Copernicus. The ESA itself is not a civilian agency. It is an agency for peaceful purposes and may have programs with a security component. If and when Europe needs space as an enabling tool for its security and defence policy, ESA will be prepared to develop the required programs.

These statements can be understood against the background of ESA’s attempt to stay relevant for both its non-EU members as well as for an EU increasingly integrated in the fields of defence policy. In 2016, however, the European Defence Action plan was adopted by the Commission which proposes in a press release “to promote the contribution of sectoral policies, such as the EU Space Program to common security and defence priorities” (EC 2016, p. 3).

Some interview partners described the securitisation of space in Europe as an “unpleasant spiral”. (IP5). With Europe so heavily relying on a functioning space infrastructure, now fears would grow that this infrastructure is being attacked, leading to calls for increased defence measures. As IP 3 mentioned, “this is now only the beginning of an arms race in outer space (...) where you say: I feel threatened, I have to aggress”. According to two interviewees, it is not so much a question if Europe will at some point set-up a Space Force, “like it or not” (IP4), but rather if this is to be left on the national domain of individual member states such as France and Germany or if “we can Europeanize it” (IP5).

4.5. Expulsion: separating space, science and politics

While in the period following the Lisbon Treaty there was clearly political support among EU member states for the EU to consider space a key future component of the CSDP, this support did not extend so far as to (yet) amounting to take-over of the ESA by the EU. However, already in 2013, the EU made clear that ESA is among the leading space-faring players with regard to its scientific achievements, but that “ESA is not a political actor” and only an “EU space policy could reinforce the European identity at the international political level” (EC 2013).

In 2016, the ESA Ministerial Council adopted the resolution “Towards Space 4.0 for a United Space in Europe” setting the priorities for further developing European space
activities. In this Resolution, ESA Member States expressed that ESA should remain “THE European Space Agency”, responsible for channeling regional, national and European demands for space programmes (ESA 2016) – which confirmed ESA’s independence from the EU framework and closed off the option of ESA becoming the EU space agency.

Shortly after this, the EU published its own plans to increase its presence in space. In 2018, the EC published an ambitious regulation with the aim to restructure the EU approach to space fundamentally. It proposed the establishment of a new European Space Programme (EUSPA), which de facto meant to upgrade the existing GNSS Agency in Prague.

On 5 November 2020, the regulation to establish the European Union Agency for the Space Program was approved by the European Council. The division of work between the European Union space programme, the member states and ESA are outlined straightforwardly: The Commission being the programme manager of the EUSPA and responsible for its implementation, including in the field of security. The satellite constellations and flagship programmes which ESA and the EU co-developed, Copernicus and Galileo will be fully financed, owned and managed by the EU. ESA will be responsible for the development, design and construction of parts of the Copernicus space infrastructure, including operations and the deployment of Galileo infrastructure. The new EU space agency is responsible for Galileo’s market uptake, systems evolution, development of the ground segment and the design and development of satellites; as well as those components of the Space Programme with research and development activities in its fields of expertise (EC 2018).

It is planned that the Commission concludes a financial framework partnership agreement with both, the new EU Space Agency and ESA. The agreement, as the regulation states, shall require that ESA applies the Union security rules, in particular concerning the processing of classified information (EC 2008, p. 71) While this is not new as ESA has created a security office and staff procedures already in 2003 to cooperate with the EC on Galileo, it is also precisely what ESA’s founding fathers aimed to avert: That ESA became involved in classification procedures for security reasons which, potentially, may restrict access to research data for the scientific community.

Also, ESA will continue to collaborate with the Commission and the space programme in the field of secure government satellite communication (GOVSATCOM) that is identified in the regulation as one of the elements of the Global Strategy for the European Union’s Foreign and Security Policy, a user-centric programme with a strong security dimension in such areas as crisis management, including civilian and military Common Security and Defence missions and operations, border and maritime surveillance, and critical infrastructure protection, including diplomatic networks, police communications, data centres, energy, and transport. (EC 2018, p. 32)

However, ESA and the European Commission still seem far away from finalising a new Financial Framework Partnership Agreement to establish their future relations in this new European space-scape. “These negotiations are reportedly complicated by frictions regarding budget management and responsibilities breakdown, in particular with regards to the role of EUSPA” (ESPI Insights 2020).
Despite an apparent willingness to further improve collaboration between ESA and the
EU, EUSPA can be understood as the separation of space science and politics, while ESA
has to reposition itself again. A common narrative shared by many ESA interview partners
was that:

ESA has no future when it comes to the question of remaining as it is. That’s not an option, it’s
impossible. It has to see then and adapt either to become then the space agency for the Euro-
pean Union inside the European Union, but it cannot be outside, absolutely impossible. Or
when it wants to remain outside it, it has to adapt and then get rid more or less of all
these things which are of relevance for the European Union. Because also the member
states will sooner or later not invest any more in that if it’s not really useful for the European
effort. (IP1)

Effectively, the ESA is only likely to continue in one of the two ways: it remains “whole” but
effectively transmutes into the new EUSPA, and takes on the political goals associated
with that, in particular the security-related tasks. According to another interviewee, the
model for this could be the European Defence Agency (IP11). The other option is that
ESA focuses on the “scientific” non-security missions while the EUSPA would cover all
security-related aspects. This would mean that ESA would basically become

a kind of CERN for space science only. So, it would keep on exploration, science and some
technology developments. Everything else – the applications, earth observation, navigation
technology goes to the EU. Through that, ESA would be reduced to such core functions like
NASA is but would remain outside the European framework. (IP5)

Yet, the institutional dynamic of European space policy is even more complicated:
While ESA representatives may fear that their main assets would be taken away
from them, the EU does not have the technical expertise to pursue a space programme
without ESA as it was precisely ESA’s aim and mission, to harmonise the national
capacities. As one IP has put it, “There’s no competition in the sense that we have
… ESA has a technical expertise that the European Union or the European Commission
doesn’t have” (IP3). It is, therefore, less a vision of disintegrating ESA but rather one of
achieving EU supremacy over ESA (Hoerber and Lieberman 2019, p. 6). In this constel-
lation, the (European) member states seem to “play this game of power politics both
ways, as they support the independence of ESA as the ESA Member States and call for
a dedicated European Space Policy as the EU Member States” (Hoerber and Lieberman
2019, p. 6).

What is striking is that the security boundary issue is understood as incompatible with
a continuing cooperation with ESA’s non-EU members. The most prominent incidence
being Brexit: With the United Kingdom’s decision to leave the EU the country also had
“to get out of all the EU space activities such as Galileo and Copernicus. (...) and of
course, they want as soon as possible to be associated like Switzerland and Norway”. While the process of becoming an associated member to the EU is a highly uncertain
and complex one, the UK is still a member of ESA, a fact that IPS regarded as a “tricky
thing”: By investing into ESA in view of potential contributions to and participation in
the EU programmes, “the UK could use ESA as a door opener into the EU” (IPS). An
exploration of the consequences of Brexit for the European space sector is beyond the
scope of this paper, but what becomes visible already is that much of the future boundary
drawing will likely be due to security and defense considerations, with ESA being open to
non-EU members for scientific collaboration and the EUSPA being reserved for EU “members only”.

5. Discussion and conclusion

In this article, I have traced the recent transformations in European space policy-making, arguing that we currently witness a process of securitisation of space that, at least partly, stands in conflict with the principles on which ESA was founded. I have shown how the securitisation of space and European space policy has taken shape and how boundaries between peaceful and militarised space activities have been activated and negotiated in this process. Tracing the narratives of ESA and EU actors through interviews and policy documents respectively, I argue that we can observe at least four moments of boundary work, in which ESA’s engagement in security and defence-related activities was discussed.

With the beginning involvement of the EC in space matters, both actors collaborated on the satellite navigation constellation Galileo, which is also used by the military, spurred a process of institutional soul-searching at ESA regarding its commitment to solely peaceful purposes. In this process, ESA extended its boundaries and began to collaborate with military stakeholders such as the European Defence Agency. In the years that followed, a stronger integration of EU member states in the field of security and defence took place and space was now framed as a crucial component to support EU security policies, including military missions abroad.

At least since the conception of the CSDP, the EU is operating as a military power by maintaining, deploying and developing military capabilities in the name of security, “although the majority of its operation are said to be of a civilian nature” (Hoijtink and Muehlenhoff 2020, p. 356). The main reason for this is that, contrary to the US, where most space initiatives have a clear military label, European actors highlight the dual-use function of space technologies (that is, a possible civilian as well as military usage) and their contributions to human security (e.g. climate change monitoring or search and rescue mission) over military aspects (Slijper 2008, p. 18, Naja and Mathieu 2015). While European space assets contribute to military operations, such as intelligence gathering, navigation for troops and classified communication, they are mainly represented as supportive of weather warnings, industrial development and, much more vague, European identity and integration.

While ESA leadership aimed at stretching its boundaries as far as possible in order to stay relevant and continue to receive funding from the EU and its member states, the fact that EU spending on ESA is not controlled by the EU parliament and has members from outside the EU, made it increasingly difficult to keep up with the ambitious pace of EU actors to draw on space assets for security policies. A dominant narrative among EU policymakers was thus that security-relevant tasks could not be left with ESA and that the agency should re-focus its activities on science and exploration. In addition, the Global Strategy for the CFSP rests on various initiatives to increase cooperation among member states in the fields of security and defence but also to build own “Union” capabilities where possible, such as the foundation of the new EUSPA.

It was shown how the shift to “space for security” as put forward by EU actors but followed – deliberatively or reluctantly – by ESA, has co-evolved with a shift in security
thinking in Europe; a retooling of the roles of security institutions, the scope of their responsibilities, the European partners they work with, and the threats they are confronting. By addressing, articulating, and acting on global threats via space activities, EU policy narratives construct and perform particular visions of its identity and the (global) political order which it seeks to establish and operate in. (Collective 2006, Jeandesboz 2016).

The EU’s evolving security mandate has therefore also created a need that ESA is said to be unable to fulfil, while at the same time providing the basis for the EU to claim some form of authority over ESA. In this debate, the question of dual-use technologies (in particular navigation systems and some earth observation technologies) have proven to be decisive boundary issues and one which an organisation that initially positioned itself as “avowedly peaceful” would always have difficulty in pushing back against. The boundary work regarding space and security has implications for the relations between ESA and the EU, but also for those between space science and politics of space for security.

First, it shows how the link between European integration and space security is forged in practice and performed through novel arrangements and institutions that represent both the long-standing expertise and infrastructures of ESA and the new organisation (EUSPA) as well as a separation between science and security politics. However, while ESA might be “squeezed out” in these new arrangements, it is certainly not becoming obsolete. At least for now, ESA is still responsible for the operational tasks of launches and infrastructural maintenance, and it is unlikely that EUSPA will take over in these fields.

Second, due to the foundations of ESA and the direction the EU is taking, this transformation shows a shift in the visions of European collaboration in space, with one organisation (ESA) outside of the EU framework and open to non-EU members and another organisation (EUSPA) accessible only to EU members and explicitly dedicated to using space for security and military purposes.

The boundaries between civilian and military use of European space capabilities and responsible institutions have long been successfully maintained. However, with the increasingly open push for space as a domain of European security, including military and defence related usages, these boundaries are currently re-negotiated and shifting, including the dilation of the terms peaceful and military and what these should entail. As such, the two space programmes in Europe display two distinct visions of uniting Europe in space: What started as a vision of peaceful cooperation and the harmonisation of resources for large infrastructure projects has now been complemented by a vision of increased synergies between civil and defence-related space application and space as a realm of EU security.

To come back to the beginning of this article, while we indeed witness a securitisation of space in current EU strategies, a European Space Force might still be far from materialising. Indeed, it seems that European space policy actors prefer the term security over defense, militarisation or even weaponisation (Hoerber and Forganni 2020, p. 14). However, as some commentators recently stated, although “it seems out of reach in the short term, a European Space Defence policy should be established in the future” (ESPI Insights 2020). It is therefore even more important to critically discuss the role of institutions that pre-date the EU and the visions on which they were founded, and how these are currently transformed through political decision-making processes towards a more assertive European integration in the fields of military and security. In the end,
how we conceptualise and envision a “united Europe in space” has fundamental political, strategic and ethical consequences for Europe and beyond.

Notes

1. The idea for an EU space force can be expected to face a lot of skepticism because military affairs are still very much a domain of national governments. Today, France is the only country that is going ahead with an undisguised militarization of its national space defense capability, and has recently re-branded its airborne armed forces as the Air and Space Force. According to the chief executive of the European Defence Agency (EDA), Jorge Domecq, Bienkowska had not discussed the idea of a European space force with him and no member state had called for a space force to his knowledge (Tefter 2019).

2. Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland and the United Kingdom. Slovenia and Latvia are Associate Members. Canada, Israel, Turkey and Ukraine take part in some projects via Cooperation Agreements.

3. These plans were already articulated in the foreseen adoption of the Constitutional Treaty which was rejected in 2005 and were later integrated in the Lisbon Treaty.

4. https://www.esa.int/About_Us/Jean-Jacques_Dordain/The_European_Space_Agency_director_general_in_interview (accessed: Feb, 7, 2021).

5. EC (2016): European Defence Action Plan: Towards a European Defence Fund https://ec.europa.eu/commission/presscorner/detail/en/IP_16_4088. Accessed: Feb, 7, 2021.

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