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The editors are pleased to present issue 2018/II of the Pécs Journal of International and European Law, published by the Centre for European Research and Education of the Faculty of Law of the University of Pécs.

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We encourage the reader, also on behalf of the editorial board, to consider the PJIEL as a venue for publications. With your contributions, PJIEL aims to remain a trustworthy and up-to-date journal of international and European law issues. The next formal deadline for submission of articles is 15 March 2019, though submissions are welcomed at any time.

THE EDITORS

Models of Legal Supervision over Local Self-Governments in Continental Europe (Excluding France)[1]

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The European Charter on Local Self-Government declares the European standards of institutions and principles which should be considered by all Member States in the construction of their own systems in order to guarantee the rights of local and regional self-governments and their elected officials. For our topic Article 8 has priority, yet also the rules on the scope of local self-governance deserve to be analysed, since the intergovernmental expert committee elaborating the Charter treated it jointly with the nature of relationships between local and central bodies from the very beginning. Consequently, the Charter's system of legal supervision cannot be understood without it. This paper examines the different models of the control over local self-governments established in some Member States of the European Union.

Keywords: European Union, local self-governments, state control, legal supervision, models

1. Introduction

1.1. The European Charter of Local Self-Government

The European Charter of Local Self-Government (hereinafter: *Charter)*, which the Council of Europe opened for signing on 15 October 1985 in Strasbourg, and which entered into force on 15 September 1988, is the first international framework convention on the minimum conditions of local democracy. Realising that local authorities are one of the main foundations of any democratic regime, and that the right of citizens to participate in the conduct of public affairs can be exercised most directly at local level, this Charter has become an international framework agreement.[2] Consequently, both post-communist and Western-European countries consider it the cornerstone of European self-governance.

The Charter declares the European standards of institutions and principles which should be considered by all Member States during the construction of their own local government systems in order to guarantee the rights of local and regional self-governments and their elected officials, Such rights are for example community and regional liberties, the constitutional foundations of local self-governance, the legal supervision of community acts by bodies independent from central government (courts),

[1] I will analyse the French system in a subsequent article.

[2] Preamble of European Charter of Local Self-Government.

financial autonomy, the right to associate and to international cooperation.[3] According to its initiators, the aspects of local self-governance, along with human rights, are crucial elements of the post-war democratic regimes.[4] Rather than the unification of their legal systems, however, one should note that this framework agreement aims to establish general standards, potentially adaptable by all Member States independently of their specificities. Hungary (at that time called Hungarian Republic) joined the Charter on 21 March 1994 and Act XV of 1997 transposed it to the Hungarian legal system.

According to the intergovernmental expert committee elaborating the Charter, local self-governance and the relationship between local and central bodies are interconnected.[5] For this very reason, the present study focuses primarily, but not only on Article 8, and – for better understanding of the supervision system set by the Charter – on the provisions regulating the scope of local self-governance.

1.2. The Scope of Local Self-Governance

According to Paragraph (1) of Article 8 of the Charter, "[a]ny administrative supervision of local authorities may only be exercised according to such procedures and in such cases as are provided for by the constitution or by statute." In other words, the Charter institutionalizes administrative supervision.

Moreover, the procedure of legal supervision is limited by the constitution and the regarding statutes. To this end, the Act on Local Self-Government sets the limits to supervision (such as the cases out of its scope) and its subject. According to the Charter, "any administrative supervision of the activities of the local authorities shall normally aim only at ensuring compliance with the law and with constitutional principles. Administrative supervision may however be exercised with regard to expediency by higher-level authorities in respect of tasks the execution of which is delegated to local authorities."[6] The Charter generally aims to protect the rights of self-governance efficiently, thus administrative supervision "only" means legal supervision.[7]

The Charter establishes that "administrative supervision of local authorities shall be exercised in such a way as to ensure that the intervention of the controlling authority is kept in proportion to the importance of the interests which it is intended to protect."[8] In other words, the supervision procedure shall implement the principle of proportionality. The Hungarian legislation sets a number of rights for the body exercising administrative supervision if it finds the local government decree or if its provisions are in conflict with the legal regulation. Firstly, it may notify the representative body and if the local self-government fails to comply with its obligation, it may initiate a judicial review. Furthermore, if needed, it may adopt the decree instead of the negligent local self-government. In this case, the local self-government fails to comply with its obligation set by law, so this intervention is considered to be proportionate to the importance of the interest to be protected. How it should be put into practice appropriately is a different question.

[3] Articles 3, 5, 7, 9 of the Charter.

[4] That's why the Charter is considered one of the basic documents of the Action Plan "Building One Europe", created under the *aegis* of the Council of Europe. For more information see: Alain Dulcamp, *La charte européenne de l'autonomie locale et son système de contrôle*. In. Annuaire des collectivités locales, Tome 19. 1999., pp. 139-172.

[5] Patrice William-Riquier, *La charte européenne de l'autonomie locale: un instrument juridique international pour la décentralisation.* Revue Française d'Administration Publique. 2007/1. (n 121-122) pp. 191-202.

[6] Article 8 of the Charter.

[7] I. Ivancsics, *A helyi önkormányzatok törvényessége ellenőrzése.* In. N. Chronowski & J. Petrétei (Eds.), Tanulmányok Ádám Antal professor emeritus születésnapjának 80. évfordulójára, Faculty of Law of the University of Pécs, 2010. p. 109.

[8] Paragraph (3) of Article 8 of the European Charter on Local Self-Government, celebrated by the Council of Europe on 15 October 1985 in Strasbourg and transplanted by Act XV of 1997.

2. Solutions Provided by States Following the French (Latin) Model with Regard to Supervision over Local Self-Governments

2.1. Belgium

In the beginning of the 1960s, a series of language acts defined the concept of cultural autonomy, and, consequently, catalysed the process of regionalization.[9] As a result, linguistic (cultural) communities and areas were created, as well as provided with public legal personality, political, administrative and financial autonomy. By increasing the role of regions, the Belgian State started to implement regional federalization.[10]

Article 162 of the Belgian Constitution declares that provincial and municipal institutions are regulated by the law, and guarantees the intervention of the supervisory authority or of the federal legislative power to prevent the law from being violated or public interests from being harmed by the provinces or municipalities.[11] Section 7 of the Institutional Reform Act of 8 August 1980 provides regions with the right of supervision (*tutelle administrative*) over municipal institutions, which may be exercised with regard to all types of local acts, but exclusively with a the view to protect legality and public interest.[12]

In the framework of decentralization processes, regions delegated a part of their power to provinces. In the Belgian system, general supervision (*tutelle générale*), exercised after the approval and coming into effect of a decision, shall be distinguished from special supervision (*tutelle spéciale*), exercised beforehand. In this respect, in the competence of general supervision, the so-called provincial council may suspend or annul municipal acts in conflict with the law. In the first case, it may call on the involved authority to withdraw or amend the unlawful decision appropriately within 40 days. Should the authority fail to comply with its obligations, the decision is annulled retroactively. In the competence of special supervision, some types of local acts – typically of financial and economic nature – come into effect with the approval of the council.[13] To sum up, the Belgian model is considered to be powerful, even though the supervisory body shall always include a reasoning of its decisions.[14]

2.2. Italy

According to the Italian Constitution, the republic is composed of municipalities, provinces, metropolitan cities, regions and the state.[15] Supervision over local self-governments is limited and covers only legality issues. Just like other states following the French example, Italy, too, experienced a long

[9] Z. Józsa, *Önkormányzati szervezet, funkció, modernizáció*, Budapest-Pécs 2006. p. 176.

[10] Cf. I. Balázs, *A francia helyi önkormányzati rendszer átalakulása napjainkban*, Állam- és Jogtudomány, Vol. 57, No. 2, 2016, p. 23.

[11] Paragraph (6) of Article 162 of the Constitution, and L. Trócsányi, *Nemzeti Alkotmányok az Európai Unióban*, Wolters Kluwer. Budapest 2016. p. 122.

[12] Section 7 of the Institutional Reform Act of 8 August 1980.

[13] Jean-Benoît Pilet, *L'autonomie locale en Belgique*, http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_belgique_fr_2009.pdf&t=1500457830&hash=6a2eb7913b0d8878b13a62a63ab3efa2 (18 July 2017) p. 45.

[14] Nadine Poulet-Christian de Visscher, *Belgiue. Études sur les functions publiques locales en Europe*, http://www.europaong.org/wp-content/uploads/2013/06/Belgique.pdf (10 Mai 2018) p. 11.

[15] Paragraph (1) of Article 114 of the Constitution of the Italian Republic.

history of outstandingly powerful administrative supervision (*tutelle administrative*) over local self-governments, exercised primarily by regions, which could annul local decisions. Later on, within the framework of the institutional reform that has been going on since the 1990s, local autonomy has been increased, and supervision has been proportionally restricted.[16]

The legislative decree of 30 July 1999 established the new organization of territorial public administration and the role of the prefect within the system.[17] Article 130 of the Constitution had traditionally provided a special regional body set by law, the so-called Regional Monitoring Committee, with the legal supervision of local self-governments, yet the constitutional amendment of 2001 repealed this provision. Nowadays, the Government's regional commissioners exercise this right along with the prefects.[18] These bodies exercise subsequent control, which, according to the Italian Constitutional Court, shall always be proportionate to the gravity of the infringement. They may not annul the unlawful decisions or suspend their execution, however, they may initiate control procedures from the central administrative organs. To sum up, the formerly sanction-centred solution has been substituted by a cooperation-centric system of supervision.[19]

As regards regional acts, they shall be presented to the body exercising administrative supervision which has 30 days to question it in the Government's name. If the act is found to be exceeding regional competence, violating the interests of the nation or other regions, it may be sent back to the Regional Council. If the Regional Council approves the act again with absolute majority, the Government may apply to the Constitutional Court.[20] Furthermore, the Regional Council may be dissolved by the President of the Republic in case of unconstitutionality or grave violations of the law.[21]

2.3. Spain

Setting up 17 self-governing communities as regions, the Spanish Constitution establishes a rather special model of territorial autonomy. Spanish regions are based on territorial (self-governmental) autonomy, their power is delegated to a representative and an executive body, and they are provided with limited law enforcement competences. Their statutes have legal effects, and in case of conflict with statutes issued by central organs, the Constitutional Court makes the decision.[22]

The so-called statutes of autonomy are the basic institutional rule of each self-governing community and the State shall recognize and protect them as an integral part of its legal system.[23] In the Spanish constitutional system, local autonomy mainly prevails in the local decision-making processes, and may

[16] Jakob Wienen-Stuart Dickson, *La démocratie locale et régionale en Italie*, https://rm.coe.int/la-democratie-locale-et-regionale-en-italie/16807509e1 (10 Mai 2018) pp. 27-28.

[17] Gaetano Armao, *The Role of the Prefect in the Italian Legal System*, IALS Student Law Review Vol. 1. Issue 2. 2014. p. 54.

[18] Luciano Vandelli, *L'autonomie locale en Italie*, http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_italie_fr_2011.pdf&t=1500471429&hash=e56492dad36365b7eef439d00c25cedf (18 July 2017) p. 6.

[19] I. Hoffman, *Gondolatok a 21. századi önkormányzati jog fontosabb intézményeiről és modelljeiről. A nyugati demokráciák és Magyarország szabályozásainak, valamint azok változásainak tükrében*, Eötvös Kiadó. Budapest 2015. p. 233.

[20] Article 127 of the Constitution of the Italian Republic.

[21] Paragraph (1) of Article 127 of the Constitution of the Italian Republic.

[22] K. Sipos, *Katalónia és a „nemzetté válás" alkotmányos folyamata* http://kisebbsegkutato.tk.mta.hu/uploads/files/archive/81.pdf (9 Mai 2018) p. 13.; and Sipos Katalin, *A regionalizáció történeti és jogi aspektusai (Spanyolország, Olaszország, Franciaország)*, Institute for Legal Studies of the Hungarian Academy of Sciences, Publications. n. 6. Budapest 1993. p. 92.

[23] A. Fábián (ed.), *A regionalizált országok önkormányzati rendszere*, in. Válogatott európai önkormányzati modellek, Dialóg Campus, Budapest-Pécs 2012. p. 42.

be exercised free from intervention, authorisation or approval by higher levels of governance. Nevertheless, this assumption does not mean that each municipality is an independent entity or a city-state within the state, or that external control is totally absent.[24] In the Franco era, local self-governments were directly controlled by the ministries and the so-called civil governor (*gobernador civil*).[25]

Since then, the State has elaborated a multilevel system to provide legal supervision over local self-governments which, in contrast to Belgium or Luxembourg, does not apply the tutelage (*tutelle*), an institution regarded incompatible with the principle of local autonomy according to the Spanish Constitutional Court. Each self-governing community shall send the adopted decision to the supervisory body, the so-called government commissioner. Furthermore, one should note that State organs may only exercise legal supervision over local decrees, thus, just like in Hungary; their competence does not cover the criterion of expediency.[26]

The system of administrative supervision is regulated by Section 65 of Act 7/85 on Local Government which offers the government commissioner three possibilities:

- If the commissioner alleges unlawfulness, he may issue a warning to the local body asking for the annulment of the contested measure within one month. If the authority fails to comply with its obligations, the government commissioner may take it to the administrative court.
- If the commissioner believes that a local authority has taken a measure exceeding its competence, he may directly apply to the administrative court without issuing a warning.
- If the commissioner believes that a local authority has taken a measure that endangers seriously the general interest of Spain, he may suspend the execution of the contested measure by its own power and issue a warning to the local body, which has a ten-day period to annul the decision, otherwise the delegate of the State may apply to the administrative court within 10 days.

In exceptional cases, if the local body consistently and unlawfully refuses to adopt a decision, which is obligatory under the law, the government commissioner may take substitutive measures.[27]

2.4. Luxembourg

In the Grand-Duchy of Luxembourg, the Municipal Act of 13 October 1988 sets the standards for the legal status of local self-governments, which are equally named municipalities, yet there are communities with city status among them.[28]

Article 107 of the Constitution establishes legal supervision over local self-governments, regulated in detail by the Municipal Act. According to the current legislation, legal supervision encompasses a number of limited competences of a higher-level authority in order to protect lawfulness and the public interest in case a local body takes unlawful measures or exceeds its competence set by law.

[24] Angel-Manuel Moreno Molina, *Local government in Spain*, http://www.ola-europe.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_en/mono_espagne_en_2013.pdf&t=1500477152&hash=78102ce4b46aa2d5067b86cc33ec5a5d (18 July 2017) p. 16.

[25] Angel-Manuel Moreno Molina (n 20): p. 3.

[26] Angel-Manuel Moreno Molina (n 20): pp. 16-18.

[27] Angel-Manuel Moreno Molina (n 20): pp. 19-20.

[28] L. Lőrincz (ed.), *Közigazgatás az Európai Unió tagállamaiban*. *Összehasonlító közigazgatási jog*, Unió, Budapest 2006. p. 301.

Supervision over local decrees is exercised by the Grand Duke, the Ministry of Home Affairs and the district commissioners. Possible measures against the local bodies, *i.e.* the city council, the collegiate body of the mayor and the aldermen, the mayor (and the vice mayor) are the following:

- Posterior approval of the local legislative procedure.
- Annulment of a decision: this competence may be exercised by the Grand Duke against decisions violating the law or the public interest. However, the supervisory body is not competent to take the necessary decision in place of the local body. In any case, the annulment shall be explained and legal grounds shall be given.
- Suspension of a decision: the Minister of Home Affairs is entitled to suspend the execution of a decision against the law or the public interest. Nonetheless, he shall inform the involved local body and if the Grand Duke does not annul the decision within 40 days, the suspension loses effect.[29]

3. States Following the German Model

3.1. Germany

German legislation makes a distinction between municipalities and the so-called *Länder* (States) rather than dividing the administrative system into local and territorial self-governments.[30]

In the interpretation of the Federal Constitutional Court, State supervision over local self-governments shall mean "the natural counterbalance of the communities rights" and it shall be exercised only for the protection of the public interest. In this respect, the Bavarian Constitutional Court emphasized that this supervision shall not transform into intervention.[31] Article 28 of the Constitution of the Federal Republic of Germany establishes that municipalities shall be guaranteed the right to regulate all local affairs in their own responsibility and shall also have the right of self-governance in accordance with the law. Their competence shall be supervised only in cases of "order or decision needed by the public interest or individual necessity."[32]

According to the Act on Municipalities, State supervision means support, protection and help for communities to fulfil their tasks appropriately, and, consequently, contribution to increase the sense of responsibility of local bodies. In other words, it aims to guarantee support in activities in compliance with the constitutional principle of the legality of public administration, rather than to guarantee their

[29] François Benchendikh, *L'autonomie locale en Luxembourg*, http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_luxembourg_fr_2010.pdf&t=1502441078&hash=f5b7995180ff314eafc8cee601e14f75 (10 August 2017.) pp. 14-16.

[30] A. Fábián, *A német önkormányzati rendszer vázlata különös tekintettel Bajorországra*, in. Fábián (n 19). p. 19.

[31] A. Fábián, *Segíthet-e az önkormányzati korrupció visszaszorításában a törvényességi ellenőrzés?*, in. F. Csefkó & Cs. Horváth (Eds.), Politika és korrupció, Pécs 2010. pp. 214- 215.

[32] Max-Emanuel Geis: *Local self-government in Germany.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_en/mono_allemagne_en_2011.pdf&t=1500450846&hash=47e682a10c40f3ce8de9fbb79f16e498 (18 July 2017) p. 28.

legality.[33] Legal supervision over local self-governments is exercised by provincial organs of State administration.[34]

In this respect, supervision is only *a posteriori* and is limited to legality (*Rechtsaufsicht*), *i.e.* to monitor the lawfulness of the local measures.[35] On the contrary, supervision in cases of delegated powers considers not only posterior legality, but also prior expediency (*Fachaufsicht*), which intervenes more deeply in the sphere of self-governance.[36] In this regards, István Hoffmann notes that *Rechtsaufsicht* means legal supervision of the decision-making process and its result, the individual and legally binding decision, while *Fachaufsicht* is within the competence of special authorities and hugely restricts the decision-making freedom of municipalities.[37]

Legal supervision equally covers preventive, corrective (in support of local bodies) and repressive measures. The instruments of control are *e.g.* the general right to information, to object, to take substitutive measures to delegate powers to the first mayor or to appoint a special commissioner.[38] If the representative body is unable to make a decision or does not comply with the instructions of the authority exercising legal supervision and this seriously jeopardizes the normal functioning of local affairs, the supervisory authority may delegate powers to the first mayor to replace the representative body until the end of the unlawful situation. In the German system, decisions may be annulled only by the Administrative, the Land or the Federal Constitutional Court.[39] To sum up, legal supervision aims to involve municipalities in general State administration and, at the same time, to maintain the final State responsibility.[40]

Other provisions of the Act establish that some local decisions shall be approved *a priori* by the supervisory authority before they are issued or announced.[41]

3.2. Austria

In Austria, municipalities are supervised by the *Land* Government at *Land* level, and by the *Land* Governor or the competent federal Minister at federal level.[42] Generally, administrative supervision means predominantly legal control over local law enforcement, with the exception of local financial management, which may be submitted also to subserviency control. With regard to local decisions, municipalities shall immediately provide information requested by the supervisory authority. Instruments and methods of supervision differ from *Land* to *Land*, but there are some similar elements:

- The right to request information and documents;

[33] A. Fábián, Az *önkormányzati jogalkotás fejlődése és fejlesztési lehetőségei*, PhD Dissertation, PhD School of the Faculty of Law of the University of Pécs. Pécs 2005. p. 28.

[34] Exceptions are provinces in Lower-Saxony, Saxony-Anhalt and Saxony, where the district self-governments are the supervisory bodies. See: Hoffmann (n 15): pp. 242-244.

[35] Max-Emanuel Geis (n 28): p. 28.

[36] Clotilde Deffigier-Evelyn Will-Muller, *Allemagne. Études sur les fonctions publiques locales en Europe.* http://www.europaong.org/wp-content/uploads/2013/06/Allemagne.pdf (10 May 2018) p. 15.

[37] Hoffmann (n 15): p. 244.

[38] Fábián (n 19): pp. 29-30., Clotilde Deffigier-Evelyn Will-Muller (n 27): p. 15.

[39] Hoffmann István, *Németország közigazgatása*, in. Lőrincz (n 24): p. 188.; Hoffmann (n 15): p. 246.

[40] Max-Emanuel Geis (n 28): p. 28.

[41] Fábián (n 19): p. 30.

[42] Hans Neuhofer, *L'administration autonome des communes en Autriche et l'incidence dans l'entrée dans l'Union Européenne,* in. *Annuaire des collectivités locales.* Vol. 17. 1997. p. 122.

- The right to prior approval in case of certain decisions;
- The right to annul certain decisions taken in administrative procedures: after hearing the representative body, the supervisory authority annuls the unlawful decision and, at the same time, informs the municipality;
- The right to take substitutive measures in order to prevent direct threat in case of negligence;
- The right to suspend the execution of the contested decision in case of threat;
- The right to impose supervisory fines;
- The right to dissolve the local council (provided to the *Land* Government).

The general rules of administrative proceedings regulate the way in which administrative supervision shall be exercised, including the right to take supervisory decisions which may be contested by the municipality before the Administrative Court.[43]

Any citizen whose rights or legal interests are violated by a local decision (which triggers an obviously unlawful situation), may lodge a special appeal before the supervisory authority within two weeks after receiving it. If the authority finds that the citizen's rights have been infringed, it may annul the contested decree and refer the matter back to the municipality for a new decision.

4. States Following the Scandinavian Model

4.1. Sweden

In Sweden, local autonomy is exercised by authorities functioning as local self-governments. Currenlty the traditional concept of *province* merely has a cultural and historical reference, without any political or administrative connotations. The two levels of local administration are the region (*län*) and the municipality (*kommuner*).[44]

Supervision over local self-governments is exercised by decentralised State organs, the so-called administrative agencies working at regional level, guaranteeing the lawfulness of local self-governance. If they find that a local decision violates the law, they may appeal to the Administrative Court or, in some cases, impose a fine. These agencies inform the Government annually on local issues.[45]

Furthermore, citizens play a crucial role in legal supervision, as they may appeal to the Administrative Court against some local decisions regardless of direct interest.[46] According to Paragraph 10 of Chapter I of the 1991 Local Autonomy Act, any citizen of a region or a municipality may challenge the lawfulness of a decision taken by the *län* or the *kommuner*. Consequently, the Administrative Court may

[43] Fábián (n 19), System of the Austrian local self-governments. p. 40.

[44] K. Szamel & I. Balázs & Gy. Gajduschek & Gy. Koi (eds.), *Az Európai Unió tagállamainak közigazgatása*, Complex, Budapest, 2012. p. 563.

[45] Isabelle Crepin-Dehaene, *L'autonomie locale en Suède*.
http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_suede_fr_2010.pdf&t=1502190284&hash=b72fa328da9dae6dee5c294320c36d7a (7 August 2017) p. 33.

[46] Examples are decisions issued by committees and assemblies if they are not preparatory or executive.

entirely or partially annul the contested decision, yet it cannot amend or substitute it, as that would be contrary to the principle of local autonomy.[47]

Obviously, the institution of the Ombudsman shall not be neglected either: it is a "forum of *quasi*-appeal" in the supervisory system over local self-governments. The Ombudsman may initiate an investigation *ex officio* or – more often – on complaint in order to determine whether the local body in question has passed the decision lawfully, in compliance with its obligations.[48]

4.2. Finland

In Finland, the territorial administration system is highly decentralised; the basic unit of local self-government is the municipality which includes both communities and the capital.[49]

The Finnish system outstandingly focuses on the implementation of Article 8 of the European Charter on Local Self-Government, *i.e.* "any administrative supervision of local authorities may only be exercised according to such procedures and in such cases as are provided for by the constitution or by statute." Exclusively legal supervision may be exercised only by authorities the competence of which is set by law. After accession to the EU, control exercised by the central Government over local self-governments has been dramatically reduced. Formerly, central authorities had supervised the functioning of local self-governments. Since then, their competences have been restricted to a very limited monitoring activity.[50]

4.3. Denmark

From 2002 to 2007, Denmark implemented a general reform of public administration in order to create a highly decentralised administration and to revise the extremely detailed system of local self-governments.[51]

Formerly, legal supervision over local decisions had been exercised by monitoring committees, the members of which had been elected by the county council. Nowadays, the officers of local self-governments is directed and official appointed by the Government (*Statsforvaltninsdirektor*) and supervision is exercised by 5 regional and 15 county prefects. They may annul the unlawful decisions or impose fines against the involved representative body in order to enforce supervisory measures. Against their decision, local self-governments may appeal to the Ministry of Home Affairs.[52]

[47] Isabelle Crepin-Dehaene (n 42): p. 35.

[48] Isabelle Crepin-Dehaene (n 42): p. 36.

[49] Szamel & Balázs & Gajduschek & Koi (n 41.): p. 584.

[50] Eija Mäkinen, Fabrice Bin, *Local self-government in Finland.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_en/mono_finlande_en_2011.pdf&t=1502183837&hash=1fdc4a7bbd8eff991e2a82ae1e207a26 (7 August 2017) p. 11.

[51] Szamel & Balázs & Gajduschek & Koi (n 41): p. 608.

[52] Alexandre Guigue, *L'autonomie locale en Danemark.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_danemark_fr_2010.pdf&t=1502183837&hash=47817c13055a6143ca747a2990379359 (7 August 2017) p. 13.

4.4. The Netherlands

In the Netherlands, the basic units of local administration are the provinces and the municipalities. Provinces guarantee regional supervision and coordination, while municipalities fulfil executive tasks.[53]

Article 132 of the Dutch Constitution establishes the boundaries of supervision over local administrative organs. The Minister of Home Affairs may supervise the provincial decisions in the name of the State, while a permanent committee created under the *aegis* of the provinces may supervise the municipalities.[54]

Decisions made by the local administrative organs may be subject only to prior supervision with some exceptions set by law, and those in conflict with the law or the public interest may be annulled only by Royal Decree. The right to cassation may be exercised against all types of decisions. The right to take substitutive measures may be exercised only in areas under divided competences.[55]

5. Models Set by Some Post-Socialist States

5.1. Poland

Poland was the first among post-socialist States to elaborate and implement a general reform of public administration in 1998. As a result, a new three-level local self-government system was created which consists of municipalities (*gmina*), counties (*powiat*) and voivodeships (*województwo*). [56]

Voivodeships do not only belong to the local self-government, but also to the state administration system, which leads to a special coexistence of the two spheres of public administration. [57]

The Polish Constitution establishes the scope, the criteria and the bodies of the supervision over local self-governments. All activities of local self-governments are subject to legal supervision, exercised by the Prime Minister, the voivodes and, regarding financial issues, by the Regional Courts of Auditors.[58]

One should differentiate between supervision over activities pursued within the own competence of the local self-government, which concerns only legal criteria, and supervision over activities based on delegated powers, which shall cover efficiency and expediency control as well.[59]

The executive body of the local self-government shall send local decrees to the supervisory authority within a week, which may assess its compliance with the law and declare its annulment within 30 days. The annulment issued by the *voivode* has retroactive effect, so the decree loses its effect from its announcement. If the supervisory body does not respond, the decision shall be considered lawful. The Prime Minister may annul the decision issued by the *voivode* or not covered by the *voivode*'s

[53] Szamel & Balázs & Gajduschek & Koi (n 41), p. 638.

[54] Articles 133-135 of the Dutch Constitution.

[55] Maëlle Perrier, *Le pouvoir local aux Pays-Bas.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_pays-bas_fr_2009.pdf&t=1502198650&hash=c31e1b9e0a20269554a0ca50983998f4 (7 August 2017) pp. 16-18.

[56] Szamel & Balázs & Gajduschek & Koi (n 41), p. 677.

[57] https://eures.praca.gov.pl/en/looking-for-a-job-in-eu/you-are-an-eu-or-efta-citizen/living-and-working-in-poland/information-about-poland/political-administrative-and-legal-system-in-poland (7 August 2017)

[58] Paragraphs (1)-(2) of Article 171 of the Constitution of Poland.

[59] Szamel & Balázs & Gajduschek & Koi (n 41), p. 678.

supervision, if it is against the law or the criteria of efficiency and expediency.[60] Within 30 days, local self-governments may lodge appeal against the decision of supervisory authorities to the Administrative Court referring to violation of law. The Administration Court may suspend the execution of the contested decision *ex officio* or by request.[61]

The Supreme Chamber of Control, created by Act of 23 December 1994, is the chief organ of State audit, which, in subordination to the National Assembly (*Sejm*), shall audit the activity of the organs of government administration, the National Bank, state legal persons and other State organization units. It shall also audit the activity of regional and local self-governments, and of other regional and local bodies regarding the implementation of the central budget and other provisions in the fields of finances, economics, management and organization.[62]

Furthermore, the Local Self-Government Act provides several methods of control and supervision according to the different forms of local autonomy, *e.g.* the revision of local decisions, the suspension of their execution, the appeal to court against an unlawful local decision, the notification sent to the local authority for the restoration of legality in case of minor violation.[63]

Finally, according to Paragraph (3) of Article 171 of the Constitution, on a motion of the Prime Minister, the Lower House may dissolve the legislative body of the local self- government (the council of the municipality, the county or the *voivodeship*) if it has flagrantly violated the Constitution or the law. Nevertheless, decision W1/94 of 5 October 1994 of the Constitutional Court established that this competence may be considered a disciplinary sanction, rather than a supervisory measure *stricto sensu*.[64]

4.2. The Czech Republic

Articles 99-105 of the Constitution regulate the principle of local autonomy and the *two-tier system*, divided into municipalities,[65] which are the basic territorial self-governing units, and into regions, which are the higher territorial self-governing units.

State supervision over municipalities shall include only the criterion of legality: "the State may intervene in the affairs of territorial self-governing units only if such is required for the protection of law and only in the manner provided for by statute."[66] Supervision of the local measures adopted within independent competences is exercised by the Ministry of Interior, while supervision of measures adopted within delegated powers is exercised by regional offices.[67] If the supervisory body alleges unlawfulness of the activities of municipalities, it may issue a legality notification. In case of independent competences, if the local organ fails to comply with its obligations, the Minister of Home Affairs may suspend the

[60] Anna Chmielarz-Grochal, Beata Marczewska, *Le pouvoir local en Pologne.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_pologne_fr_2014.pdf&t=1502271155&hash=d15a19838b3b649216478588c6a3b233 (8 August 2017) pp. 16-18.

[61] Z. Józsa, *A lengyel regionális reform*, http://www.terport.hu/webfm_send/344 (8 August 2017) p. 26.

[62] Ibid.

[63] Z. Józsa, *Változatok a regionalizációra: a lengyel, a szlovák és a cseh modell*, p. 51.

[64] Anna Chmielarz & Grochal, Beata Marczewska (n 56), p. 20.

[65] Szamel & Balázs & Gajduschek & Koi (n 41), p. 710.

[66] Paragraph (3) of Article 101 of the Constitution of the Czech Republic.

[67] Ilona Kruntoradova, PetrJüptner, *Local self-government in Czech Republic.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_en/mono_rep_tcheque_en_2013.pdf&t=1502285197&hash=748162253d2c2584d5d8172b5f5675bf (8 August 2017) p. 41.

execution of the contested decision. In case of delegated powers, the supervisory authority may pursue a complete revision of the unlawful situation.[68]

With regard to higher level territorial self-governing units, the supervision system is completely different. In case of independent competence, the Minister of Home Affairs and the other entitled central bodies may only exercise legal control, including the right to suspend the execution of unlawful decrees. In case of delegated powers, though, they do not merely investigate the compliance of local decisions with legal provisions, but also with the directives and recommendations of central bodies.[69]

4.3. Slovakia

In Slovakia, the system of local self-governments has two levels: municipalities at local level and higher territorial units (self-governing regions).[70]

Legal supervision over local self-governments is exercised by law enforcement bodies, *i.e.* by the courts and the prosecutors. Thus, bodies of State administration are not entitled to supervise local government activities in Slovakia.

According to the 2001 amendment of the Constitution[71], county prosecutor may supervise the legality of decisions issued by municipalities, while the regional prosecutor may exercise legal supervision over decrees of the self-governing regions. Local acts are not *de jure* sent to the prosecutor's office, yet /s/he may investigate them at any time and may initiate an investigation at the request of any individual or legal person. The prosecutor is entitled to supervise the legality of both normative and individual decisions. Furthermore, in his consultative function in the assemblies of the local legislative bodies, he may notify them and object to unlawful drafts. If a local act is approved despite his objection, he may initiate proceedings before the court.[72]

Appeals against decisions issued by municipalities are decided by one of the 55 district courts, while there are 8 regional courts of second instance to decide the legality of decisions issued by the self-governing regions. They work in councils composed by a president and two judges. If they ascertain the unlawfulness of the contested decision, they may annul it.[73]

5.4. Slovenia

In Slovenia, there are 210 municipalities as parts of the local self-government system. Apart from the regions created for statistical and project-management purposes, no other administrative units are vested with public legal status or representative bodies.[74]

[68] Cf. Szamel & Balázs & Gajduschek & Koi (n 41), p. 714.

[69] Cf. Szamel & Balázs & Gajduschek & Koi (n 41), p. 713.

[70] Galligan, J. Denis & Smilov, M. Daniel (1999), *Administrative Law in Central and Eastern Europe,* Central University Press, Budapest. pp. 332- 333.

[71] Venice Commissionon Further Constitutional Developments (Amendments to the Constitution of the Republic of Slovakia. https://www.venice.coe.int/webforms/documents/?pdf=CDL(2001)109-e (11 May 2018) p. 1-5.

[72] Ludmila Malikova, Frédéric Delaneuville, *L'autonime locale en Slovaquie.* http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_slovaquie_fr_2009.pdf&t=1502359037&hash=201278ecb41f89a0f65d07f51b1c0d0e (9 August 2017) p. 32.

[73] Ludmila Malikova, Frédéric Delaneuville (n 67), p. 33.

[74] Cf. Szamel & Balázs & Gajduschek & Koi (n 41), p. 799.

According to Article 140 of the Constitution of the Republic of Slovenia, State authorities shall supervise the proper and competent performance of local affairs, apart from supervising the legality of local decisions.[75] Control instruments are specifically regulated by the Local Self-Government Act.

The supervision system of municipalities is based on the principle of local self-governance, thus the scope of supervision depends on the type of activities. If they are pursued within the independent competences of local bodies, state authorities may only supervise their legality. In case of matters of delegated powers, the state also supervises the suitability and expertise.[76]

If the supervisory body alleges that a local decision is in conflict with the Constitution or the law, it shall notify the municipality to cease the unconstitutional or the unlawful situation and propose an appropriate solution. If the municipality does not amend the contested decision, the supervisory body shall propose to the Government to initiate the proceedings before the Constitutional Court. In other words, the supervisory authority is not entitled to annul, amend or substitute the decision, which may be decided only by the Constitutional Court, in case of normative acts, or by the Administrative Court, in case of individual decision.[77]

With regard to delegated powers, supervisory bodies may decide complaints filed against local decrees or may issue resolutions to provide municipalities with instructions how to increase the expediency of delegated activities and other mandatory measures. If the addressed local body does not fulfil the resolution, the supervisory authority may propose the Government to initiate the proceedings to withdraw the delegated powers. The local body may challenge the decision before the court.[78]

5.5. Romania

Romanian public administration is divided into territorial-administrative units at local and regional level. The units of local administration are integrated. At the regional level we can find both prefects and municipalities.[79]

The Government shall appoint a prefect in each county and in the Bucharest Municipality. The prefect is the Government's representative at local level and shall direct the decentralised public services of ministries and other bodies of public administration in the territorial-administrative units.[80] Furthermore, he exercises supervision over law enforcement at local level.[81]

An important constitutional provision establishes that there is no subordination between prefects and local bodies (local councils, mayors, county councils and their presidents). However, if the prefect

[75] Guillaume Protière, *Le pouvoir local en Slovénie*, http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_slovenie_fr_2012.pdf&t=1502359037&hash=9f7460a85a03d19f3b071ac9b99525d5 (9 August 2017) p. 10.

[76] Stane Vlaj, *Local self-government in the Republic of Slovenia with a Special Emphasis on the Status of The Capital City Ljubljana*, https://pdfs.semanticscholar.org/3326/4015b12a32ef9ffabe104eac11860d5d5d8a.pdf (9 August 2017) p. 6.

[77] Stane Vlaj (n 71): p. 29.

[78] Stane Vlaj (n 71): p. 30.

[79] Szamel & Balázs & Gajduschek & Koi (n 41), p. 824.

[80] Paragraphs (1) and (2) of Article 123 of the Consitution of Romania.

[81] Emil Balan & Troanta Rebeles & Teodor Dragos: *Local self-government in Romania*, http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_en/mono_roumanie_en_2011.pdf&t=1502359037&hash=44a5f22605ab28bd5d555d1953f1cec1 (10 August 2017) p. 8.

deems the act of the county or the local council unlawful, he may challenge it before the Administrative Court. The act thus challenged shall be suspended *de jure*.[82]

The prefect's institution is not only recognised by the Constitution, but also by Act no. 340/2004, which established detailed provisions for the principles and the scope of his activities. The Act provides legal supervision over decisions issued by the county, the local council and the mayor in the field of public administration.[83]

5.6. Estonia

In Estonia, the units of local self-government are rural municipalities and cities and, according to the Constitution of the Republic of Estonia, other entities (regions) may be formed. The system of local self-government mainly followed German model, yet Russian influence can be noticed as well,[84] which means that the state system and the legal order borrows some element from the Russian pattern.

In accordance with Article 160 of the Constitution, supervision over the activities of local self-governments is exercised by three bodies: the county governors (*maavanemad*), the National Audit Office (*Riigikontroll*) and the Chancellor of Justice (*Õiguskantsler*).[85]

County governors exercise legal supervision over local decrees issued in individual cases. If they notice conflict with the law, they notify the local body to cease the unlawful situation within 15 days. If the authority fails to comply with its obligation, county governors may apply to the Administrative Court.[86]

According to Article 139/C of the Constitution, the Chancellor of Justice scrutinises legislative instruments of local authorities for conformity with the Constitution and the laws. In order to help him to fulfil his task, local bodies shall send him every approved decision. Alleging unlawfulness, the Chancellor notifies the local body to amend the decision otherwise he may turn to the court to annul the whole decision or its unlawful provision(s). Furthermore, an amendment to the Act on the Chancellor of Justice, which entered into effect on 1st January 2004, expanded his function as an Ombudsman. Consequently, he has jurisdiction over individual complaints against local decrees violating fundamental rights.[87]

[82] Gabriela Condurache, *Le pouvoir local en Roumanie*, http://www.olaeurope.com/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_roumanie_fr_2013.pdf&t=1502372971&hash=1cec5ee3753e29b0b64664f44b7ba310 (9 August 2017) p. 57., Paragraphs (4) and (5) of Article 123 of the Constitution of Romania.

[83] Gabriela Condurache (n 77), p. 57.

[84] Szamel & Balázs & Gajduschek & Koi (n 41), p. 876.

[85] Vallo Olle, Rodolphe Laffranque, *L'autonomie locale en Estonie.* http://www.ola-europe.eu/index.php?eID=tx_nawsecuredl&u=0&file=fileadmin/user_upload/ressources/monographie/mono_fr/mono_estonie_fr_2010.pdf&t=1543326482&hash=263613e3f3d61040df5d9924e0183a6f (10 August 2017) p. 31.

[86] Vallo Olle, Rodolphe Laffranque (n 80), p. 32.

[87] Vallo Olle, Rodolphe Laffranque (n 80), pp. 33-34.

6. Summary

In summary, European local self-government systems are in compliance with Article 8 of the Charter, which greatly contributes to the legal unification of control and supervision in the continent.

In most cases, state control over the activities and decisions of local self-governments means legal supervision, which differs in intensity because of the wide range of competences supervisory authorities are provided with. In general, expediency supervision has been drastically reduced, yet it is still present with regard to certain types of decisions in Belgium, Germany, Austria, Poland and Slovenia.

Furthermore, apart from some exceptions, legal supervision is always exercised *a posteriori*, *i.e.* the contested decision comes into effect and is executed regardless of the assessment of the supervisory body. Thus, when local decisions are sent to the controlling authorities and announced according to the local custom, they are considered executable.

In the analysed countries, typically the reform processes of the 1990s have substituted the traditional administrative tutelage for a more flexible system with control or supervision measures. The competences of the organs exercising control over local self-governments are relatively different from state to state. In Italy or France, these authorities have above all initiatory functions and a few independent competences, while in Spain, Austria, the Netherlands, Belgium, Germany, England and Hungary they may also take substitutive measures. The contested decisions may also be annulled by court (in Spain, Germany, Sweden, Poland, Slovakia, Slovenia, England, Estonia and Hungary), or by the supervisory authorities themselves (in Belgium, Luxembourg, Austria and Denmark.)

The latest still reminds of the traditional tutelage exercised by the State. Finally, the unlawful decision may be challenged also by individuals, which is also a common denominator in the different systems.

Who Owns What in Outer Space? Dilemmas regarding the Common Heritage of Mankind

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Outer space is full of resources with great economic potential for Earth nations. Several issues arise when superpowers get involved in space activities, e.g. the status of celestial bodies and their resources, equality between states and potential conflicts on Earth. The lack of international regulation surrounding these issues could result in uncontrolled turmoil regarding space exploitation. This paper encompasses three goals. Firstly, to review the short history of mining in space and developing space law. Secondly, by analyzing the relevant legal instruments, it takes a look at what is possible today regarding exploitation rights on celestial bodies. The Outer Space Treaty and the Moon Agreement are crucial in this process. Thirdly, by analyzing the exploitation regimes on similar areas to the Moon and outer space, alternatives are illustrated for a future international exploitation regime. An analysis of the Common Heritage of Mankind principle will form the bridge between the mentioned goals. The Moon Agreement attempted to create an exploitation regime. However, it failed due to the Common Heritage of Mankind principle. Thus, an analysis of this principle should not be left out. The paper is an attempt to clarify the importance of property rights in the future of space exploitation and its complexity in the absence of a coherent international regime for the exploitation of space and the celestial bodies. It is necessary to stress why an international regime is necessary for the exploitation of space.

Keywords: Space Mining, Property Rights, CHM, Sovereignty, res communis omnium usus

"From behind a screen on earth, it is now possible to detect the substances of stars, planets and even galaxies, light years away."[1]

Philip Massey and Margaret Hanson

"The Earth is the cradle of mankind, but one cannot stay in the cradle forever."[2]

Konstantin Tsiolkovsky

[1] Massey, P., Hanson, M., *Astronomical Spectroscopy.* In: T. Oswalt, H. Bond, eds., Springer Netherlands, 2013.
[2] Tsiolkovsky, Konstantin E., *Selected Works of Tsiolkovsky*, University Press of the Pacific, U.S. 2004.

1. Introduction

As there is a competition for resources between great powers,[3] the Common Heritage of Mankind principle[4] does or should control the activities of space mining;[5] however, this issue remains controversial.[6]

Underdeveloped states[7] often argue the fact that mineral reserves are being exploited in areas that needs protection, outer space being an example. It has also been argued that all minerals in space are considered as a common heritage of humanity.[8] However territorial sovereignty[9] has in part defined both

[3] There is a social hierarchy in international relations, and *Great Powers* enjoy the highest status within that social hierarchy, states strive for higher status in the international social hierarchy and apply different status-seeking strategies in order to achieve that goal. Stolte, C., *Great Powers and the Drive for Status in International Relations*. In: Brazil's Africa Strategy, Palgrave Macmillan, New York, 2005 .

[4] Common heritage of mankind also termed the common heritage of humanity, common heritage of humankind or common heritage principle is a principle of international law which holds that defined territorial areas and elements of humanity's common heritage cultural and natural should be held in trust for future generations and be protected from exploitation by individual nation states or corporations. The common heritage of mankind principle consists of four elements. 1 It prohibits states from proclaiming sovereignty over any part of the deep seabed. 2 Requires that states use it for peaceful purposes. 3 Sharing its management. 4 The benefits of its exploitation. *See* Harry, Martin, The Deep Seabed: The Common Heritage of Mankind or Arena for Unilateral Exploitation? 40 *Naval Law Review* 207, 226, 1992. Mahmoudi, Said, *The Law of Deep Sea-Bed Mining: A Study of the Progressive Development of International Law concerning the Management of the Polymetallic Nodules of the Deep Sea-Bed*, Stockholm, Sweden: Almqvist & Wiksell International, 130, 1987 . Molitor, Steven, The Provisional Understanding Regarding Deep Seabed Matters: An Ill-Conceived Regime for US Deep Seabed Mining, *20 Cornell International Law Journal* 223, 228, 1987. On decision of the General Assembly *see* Resolution 2467A, GA Res 2467A XXIII , UN GAOR, 23rd sess, 1752nd plen mtg, UN Doc A/RES/2467 XXIII 1968 . The Seabed Committee drafted a number of resolutions, the most important being Resolution 2574D and Resolution 2749. Consequently GA Res 2574D XXIV , UN GAOR, 24th sess, 1833rd plen mtg, UN Doc A/RES/2574 XXIV 1969 *Moratorium Resolution* . GA Res 2749 XXV , UN GAOR, 25th sess, 1933rd plen mtg, UN Doc A/RES/2574 XXV 1970 *Declaration of Principles*.

[5] Asteroid mining may seem like an idea out of an *Andy Weir* novel, however, with recent developments many are estimating that asteroid mining of near earth objects is only 10-20 years out of reach. Near Earth Object or NEO refers to an object that has been pulled into the "neighborhood" of earth either by earth's gravitational pull or that of a nearby planet. Minerals that can be found in asteroids are: iron, nickel, iridium, palladium, platinum, gold, and magnesium to name a few. Metal, however, is not the only thing that would be mined from asteroids. There is a certain interest in the mining of water. For further read *see* General Kinematics, Mining in Space. *Available at* https://www.generalkinematics.com/blog/mining-in-space/.

[6] Guntrip, E., 'The Common Heritage of Mankind: An Adequate Regime for Managing the Deep Seabed?', 4 Melbourne Journal of International Law 376, 2003. To date, there is no clear-cut answer to whether private mining is legal or not. A personal statement by Professor Van Der Dunk. There is no 'loophole' that allows individuals to claim ownership of celestial bodies because Article II of Outer Space Treaty only addresses nations. On this regard *see, e.g.*, Gorove, S., Interpreting Article II of the Outer Space Treaty, *37 FORDHAM L. REV.* 349, 351 1969 . The Treaty also ensures that the use of equipment and facilities necessary for exploration and use shall not be prohibited, *see* Outer Space Treaty, Article I. and, shall proceed only on a non-interference basis, Outer Space Treaty, Article IX. Finally, the OST establishes the principle that states are responsible for objects they or their citizens launch into space, and retain jurisdiction over those objects once in space. Article VIII of Outer Space Treaty.

[7] Eugene Staley defined an underdeveloped country as "A country characterized by i mass poverty which is chronic and not the result of temporary misfortune and ii obsolete methods of production and social organization, which means that the poverty is not due to poor natural resources and hence could presumably be lessened by methods already proved in other countries". *Available at* http://www.economicsdiscussion.net/underdeveloped-countries/underdeveloped-countries-meaning-and-classification-of-definitions/18975 .

[8] The idea of the common heritage of mankind was launched in a memorable speech made at the United Nations General Assembly on 1 November 1967 by the representative of Malta, Mr. Arvid Pardo. The only precedent is a proposal made by the Argentine jurist José León Suárez. He was entrusted by the League of Nations Experts Committee for the Progressive Codification of International Law with the drafting of a report on the international rules relating to the exploitation of marine living resources. Société des Nations, *Comité d'experts pour la codification progressive du droit international, Rapport au Conseil de la Société des Nations*, Genève, p. 1232, 1927.

[9] Territorial Sovereignty is the right of a State to exercise over its own territory, to the exclusion of any other states, the functions of a state. Shaw, M, *Title to Territory in Africa: International Legal Issues*, NY: Clarendon Press, p. 1. 1986.

international relations [10] and international law [11] since the 1648 Treaty of Westphalia. [12] The primary exception to this principle is the international commons [13] when dealing with outer space, in which theoretically all of humanity became sovereign and protectors of the international commons. [14] The law of outer space is a branch of international law regulating activities in areas that fall either partially or totally outside national sovereignty. The law that governs these vast bodies includes state practice and *opinio juris* custom, [15] treaties, [16] general principles, [17] and scholarly writing. [18]

The legal precedent set by the North Sea Continental Shelf Cases, [19] requires "widespread and representative participation provided it include[s] that of [the] States whose interests [are] specially affected" [20] to create customary laws. [21]

The question is significant since airspace partly falls under national sovereignty in areas where it lies over national territories and territorial waters, while outer space never does. [22]

[10] Further read in this regard, *see* Goldsmith, Jack, Sovereignty, International Relations Theory, and International Law, *Stanford Law Review* 52, no. 4 2000. Osiander, Andreas, Sovereignty, International Relations, and the Westphalian Myth, *International Organization*, no. 2, 55, 2001 . Cooley, Alexander, Hendrik Spruyt, Incomplete Sovereignty and International Relations. In: *Contracting States: Sovereign Transfers in International Relations*, 1-18, Princeton: Oxford: Princeton University Press, 2009. Lake, David A., The New Sovereignty in International Relations, *International Studies Review* 5, no. 3, 303-323, 2003 .

[11] Territory and its normative translation, that is territorial sovereignty, is still the cornerstone of contemporary international legal order, as Article 2 1 of the United Nations Charter solemnly declares. Distefano, Giovanni, Theories on Territorial Sovereignty: A Reappraisal, *Journal of Sharia and Law*, Vol. 41, pp. 25-47, 2010.

[12] Herber, Bernard P. "The Common Heritage Principle: Antarctica and the Developing Nations." *The American Journal of Economics and Sociology*, vol. 50, no. 4, pp. 391–406, 1991. The 1648 treaty resulted to a principle known as Westphalian sovereignty which simply means that each nation state has sovereign over its territory and domestic affairs, to the exclusion of all external powers. For further reading *see* Nexon, Daniel H., Westphalia Reframed. In: *The Struggle for Power in Early Modern Europe: Religious Conflict, Dynastic Empires, and International Change*, Princeton University Press, 265-288, 2009.

[13] The term in this respect includes spaces beyond national jurisdictions, essential resources and concerns such as biodiversity conservation and climate change, are the focus of much international interest from a governance perspective. *See* further Morse, Edward, Managing International Commons, *Journal of International Affairs*, 31 1977 . Vicary, Simon, The Voluntary Provision of a Public Good in an International Commons, *The Canadian Journal of Economics / Revue Canadienne D'Economique* 42, no. 3, 984-996, 2009 .

[14] Shackelford, Scott J., The Tragedy of the Common Heritage of Mankind, *Stanford Environmental Law Journal*, Vol. 27, pp. 101–120, 2008.

[15] The ICJ in its jurisprudence, has relied on, and interpreted, Article 38 1 b to include two elements that assist the Court to determines the existence of an alleged customary international law — state practice and opinio juris also known as o*pinio juris sive necessitates*. The ICJ explained opinio juris, in the *Nicaragua case.*

[16] The *treaties* commonly referred to as the "five United Nations *treaties* on outer *space"*.

[17] The Declaration of Legal Principles, The Broadcasting Principles, The Remote Sensing Principles, The Principles Relating to Remote Sensing of the Earth from Outer Space, The Nuclear Power Sources Principles and The Principles Relevant to the Use of Nuclear Power Sources in Outer Space.

[18] D'Amato, Anthony, The Concept of Special Custom in International Law, *63 American Journal of International Law*, 211-223, 1969 .

[19] *The jurisprudence of the North Sea Continental Shelf Cases sets out the dual requirement for the formation of customary international law: 1 State practice the objective element and 2 opinio juris the subjective element .*

[20] *North Sea Continental Shelf, Judgment, I.C.J. Reports 1969, p. 3.*

[21] For further reading in this regard *see* Friedmann, Wolfgang, The North Sea Continental Shelf Cases—A Critique, *The American Journal of International Law* 64, no. 2, 229-2240 1970 . Nelson, L. D. M., The North Sea Continental Shelf Cases and Law-Making Conventions, *The Modern Law Review* 35, no. 1, 52-56 1972 . Uburn, F. M., The North Sea Continental Shelf Boundary Settlement, *Archiv Des Völkerrechts* 16, no. 1, 28-36 1973 . Goldie, L. F. E., Sedentary Fisheries and the North Sea Continental Shelf Cases—A Paradox Revealed, *The American Journal of International Law* 63, no. 3, 536-543, 1969 .

[22] Further read in this regard *see* Sand, Peter, Lyon, James, An Historical Survey of International Air Law Since 1944, *7 McGill L.J.* 125 1961 .

This represents a redefinition of the old doctrine of sovereignty that provided for the ownership of land and the airspace above it, rights *ad coelum*.[23] As technology progresses and space flights become as common as air travel, space law will likely react to allow some form of ownership.

However, governance of the international commons is not customary; it is laid out in treaties including the 1967 Outer Space Treaty,[24] the 1982 UNCLOS,[25] and to a lesser extent the 1969 Antarctica Treaty System ATS .[26] These regulations were created during the Cold War[27] at a time before technological progress had fully opened up these areas to economic activity.

2. A Brief Historical Analysis of Sovereignty in Space

The concept of sovereignty, once a relatively uncontested dilemma, has for a long time been a major question of rivalries within international law and international relations theory.[28]

Rather than presupposing that the concept of sovereignty[29] has a timeless or universal meaning, more recent scholarship has focused on the changing meanings of this concept across a variety of historical and political contexts.[30]

The issues encompassing sovereignty over outer space are to become ever more critical,[31] as any heated issue in international relations, growing pressure on natural resources and the need for energy and national security are likely to become major issues in the twenty-first century.

Sovereignty in the sense of contemporary public international law denotes the basic international legal status of a state that is not subject, within its territorial jurisdiction, to the governmental, executive,

[23] The rule *ad coelum* means: "Whose is the soil, his it is up to the sky", or in a more simple explanation "He who possesses the land possesses also that which is above it". *See Dictionary,* 4th Ed. P. 453 1951 . And Broom, Herbert, *Legal Maxims*, 8th Ed. P. 395 1911 .

[24] The 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205 entered into force Oct. 10, 1967 [hereinafter Outer Space Treaty]; The 1972 Convention on International Liability for Damage Caused by Space Objects, Mar. 29, 1972, 24 U.S.T. 2389, T.I.A.S. No. 7762, 10 I.L.M. 965.

[25] United Nations Convention on the Law of the Sea art. 1, para. 1, Dec. 10, 1982, 1833 U.N.T.S. 397 [hereinafter UNCLOS].

[26] The Antarctic Treaty System ATS consists of a number of separate international instruments and their associated measures including: the *Antarctic Treaty* 1961 ; the *Agreed Measures for the Conservation of Antarctic Fauna and Flora* 1964 ; the *Convention on the Conservation of Antarctic Seals* 1972 ; the *Convention for the Conservation of Antarctic Marine Living Resources* 1981 ; the *Protocol on Environmental Protection to the Antarctic Treaty* 1991 the *Madrid Protocol* ; and recommendations of Antarctic Treaty Consultative Meetings ATCMs and several Special Meetings in the form of decisions, measures and resolutions. Antarctic Law Interest Group, 'Antarctic Treaty Papers' 2005. Kriwoken, L.K., Keage, P.L., 'Introduction: the Antarctic Treaty System'. In: J Handmer ed , *Antarctica: Policies and Policy Development*, Centre for Resource and Environmental Studies, Australian National University, Canberra, Australia, 1-6 1989 .

[27] According to Martineau, reactions to the realist critique ushered in a second period of confidence from 1960 to 1989, wherein international law was seen as evolving toward what Jenks termed the 'common law of mankind', capable of bridging a gap between sovereign autonomy and the international community. Anne-Charlotte, Martineau, The Rhetoric of Fragmentation: Fear and Faith in International Law, *Leiden J. of Int'l L. 1*, 1-2, 2009.

[28] Bartelson, Jens, The Concept of Sovereignty Revisited, *EJIL* 17, 463–474, 2006.

[29] The Montevideo Convention on Rights and Duties of States of 1933, Article 1 provides:"*The State as a person of international law should possess the following qualifications: a a permanent population; b a defined territory; c government; and d capacity to enter into relations with other States"*, *Montevideo Convention on the Rights and Duties of States*, Art. 1, Dec. 26, 1933,165 LNTS 19.

[30] Spruyt, H., *The Sovereign State and Its Competitors: An Analysis of Systems Change*, N.J: Princeton University Press 1994 . Bartelson, Jens, *A Genealogy of Sovereignty*, Cambridge University Press, Cambridge, pp. i-vi. 1995 .

[31] Siddharth, Badkul, The Changing Concept of Sovereignty in Outer Space, *Legal Bloc Journal*, Vol 1, Issue 2, p. 1, 2015.

legislative, or judicial jurisdiction of a foreign state or to foreign law other than public international law.[32]

Sovereignty is the legal principle by which states exercise the exclusive control of a supreme authority over territory without any interference by foreign states.

Throughout history and for a variety of political, economic and social reasons, one of the primary activities that states and their historical precursors have engaged in has been fierce competition to acquire territory. Although sovereignty is merely a concept, it has been universally applied in order to protect and maintain a state's control within its boundaries. [33]

Article 2 1 of the United Nations Charter also recognizes that all states are equal and sovereign because they are all politically independent. [34] However, the concept of sovereignty [35] in outer space is an issue that is growing among the super-powers of today's international community. Having said this, there is the principle of *res communis*, [36] which concerns the prohibition of national appropriation, freedom of exploration, and the province of all mankind.

"Outer space" is a new term in both a legal [37] and political sense, [38] and being comparatively novel, it has unfortunately not been explicitly defined since World War I. [39] Here, it is worth considering a major question which arises very often: at what point does air space stop and outer space begin? [40]

According to the Chicago Convention, "The contracting States recognize that every state has complete and exclusive sovereignty over the airspace above its territory". [41]

However, the concepts of jurisdiction ratione instrumenti and ratione personae on the other hand, apply to outer space and are recognized in the legal framework for the regulation of man's activity wherever it may take place in the universe. [42] In addressing sovereignty, one must necessarily address the challenges arising in the event that property rights are granted.[43] These vary from environmental concerns and conflicts on Earth. Superseding both the 1928 Havana Convention, [44] and the Paris

[32] Steinberger, H., *Encyclopedia for Public International Law*, Max Planck Institute for Comparative Public Law and International Law, 414 2013 .

[33] Sittenfeld, Linda R., The Evolution of a New and Viable Concept of Sovereignty for Outer Space, *4 Fordham International Law Journal*, 199-212, 1980 .

[34] Charter of the United Nations 26 June 1945, United Nations Conference on International Organization Documents, XV 1945 , art. 2 1 .

[35] According to art. 11 3 of the Moon Agreement, "neither the surface nor the sub-surface of the Moon nor any part thereof, or natural resources in place, shall become property of any State, or international, or intergovernmental or non-governmental organization, national organization or non-governmental entity or of any natural person".

[36] *Res communis* is the common heritage of humankind. The Concept of *Res Nullius* is of Roman origin and states that a property does not belong to any person till a person claims ownership rights. Butler, Lind L., The Commons Concept: A Historical Concept with Modern Relevance, *23 Wm. & Mary L.Rev.* 835, 847, 1982. Unlike *res communis*t he property is capable of being appropriated by a sovereign.

[37] However in reality all too often the terms used in legal discourse either have no universally agreed definitions or are defined very broadly and hence allow for different interpretations. Lyall, Francis, Larsen, Paul B., *Space Law: A Treatise*, UK: Ashgate Publishing, p. 2, 2009.

[38] Further read on the political sense of the term "outer space" *see* National Sovereignty of Outer Space, *74 6 ,Harvard Law Review*, 1154-1175 1961 . *Note*.

[39] Cooper, John C., The Rule of Law in Outer Space, *47 1 , American Bar Association Journal*, 23-27 1961 .

[40] Buck, Susan J., *The Global Commons: An Introduction*, 2nd ed., 1998 .

[41] Chicago Convention on International Civil Aviation, art. 1, Dec. 7, 1944, 61 Stat. 1180, 15 U.N.T.S. 295.

[42] Gbenga, Oduntan, The Never Ending Dispute: Legal Theories on the Spatial Demarcation Boundary Plane Between Airspace and Outer Space, *1 2 , Hertfordshire Law Journal.* 64-84, 2011 .

[43] Cherian, GJ., Abraham, J., Concept of Private Property in Space – An Analysis, *JICLT*, 211-220, 2007.

[44] Otherwise the Pan-American Convention on Air Navigation of 20 February 1928 *129 L.N.T.S. 223* , superseded by the Chicago Convention on International Civil Aviation, signed at Chicago on 7 December 1944: *15 U.N.T.S. 295*.

Convention of 1919,[45] the Chicago Convention transcribed the first article on sovereignty from the Paris Convention almost as it was: "*The contracting States recognize that every State has complete and exclusive sovereignty over the airspace above its territory"*. [46]

Kelsen considered that a sovereign state had jurisdiction over space. He thought not primarily of the physical connections but of the fact that the state had jurisdiction within something he called a "*Geltungsraum*", [47] *i.e.* a "space of validity".[48]

Kelsen described this space as an area where not only the legal application of a territorial states but also the legal effect from a judicial act of that state, is three dimensional. [49]

Historically, the concept of sovereignty was the defining principle of the state in the Peace of Westphalia: *Cuius regio,* [50] *eius religio,* [51] the one who rules, selects the religion .

B. L. Manelis, a Soviet legal scholar, wrote: "[s]overeignty should be considered as a social phenomenon, which is closely connected with the state, its role in international relations and the regularities of its development." [52]

However, in the late 1940's, individual scientists, in particular I. D. Levin expressed a later origin of sovereignty, linking it to the period of the collapse of feudalism and the establishment of capitalist production relations. [53]

Levin also stated: "[i]nternational law and sovereignty are not only compatible, but are also a logically necessary correlation as they presuppose each other." [54] As noted above, there is a considerable amount of literature that deals with the issue of "sovereignty".[55] One eminent scholar has described the concept of sovereignty as "organized hypocrisy". [56] Other authors have referred to it as being "of more value for purposes of oratory and persuasion than of science and law". [57]

[45] Convention Relating to the Regulation of Aerial Navigation Signed At Paris, October 13, 1919, League of Nation Treaty Series 1922 No. 297. *It is no longer in force.*

[46] Chicago Convention on International Civil Aviation, art. 1, Dec. 7, 1944, 61 Stat. 1180, 15 U.N.T.S. 295.

[47] Expanding a theory's scope of validity.

[48] Engvers, A., *The Principle of Sovereignty in the Air, Master Thesis*, Lund University, Sweden, p. 33, 2001.

[49] *Ibid* at, 33.

[50] Latin: 'In a [prince's] country, the [prince's] religion' . *The Oxford Dictionary of the Christian Church* 3 rev. ed. Ed. Cross, F. L., Livingstone, E. A., Oxford University Press 2005 .

[51] Means "Whose realm, his *religion*", meaning that the *religion* of the ruler was to dictate the *religion* of those ruled. von Friedeburg, R.C.F. 2011 . Cuius regio, eius religio: *The Ambivalent Meanings of State-building in Protestant Germany*, 1555-1655, Berghahn Books, 2011.

[52] Manelis B.L., *Problems of Sovereignty*, Resume of Ph.D. Dissertation, Moscow, p. 9, 1966.

[53] Levin I.D, *On the Issue of Essence and Significance of Sovereignty*, "Soviet State and Law", no. 6, p. 35, 1949.

[54] Levin, I. D., *The Idea of Sovereignty in Soviet and International Law*, p. 112 Moscow, 1974 .

[55] Jackson, John, Sovereignty - Modern: A New Approach to an Outdated Concept, *97 Am. J. Int'l L. 782-802* 2003.

[56] Krasner, Stephen, *Sovereignty: Organized Hypocrisy, State; Sovereignty, and National Governance* Gerald Kreijen et., al. eds., 2002; where he describes four ways that the term "sovereignty" has been used: domestic sovereignty, referring to the organization of public authority within a state and to the level of effective control exercised by those holding authority; interdependence sovereignty, referring to the ability of public authorities to control trans-border movements; national legal sovereignty, referring to the mutual recognition of states or other entities; and Westphalian sovereignty, referring to the exclusion of external actors from domestic authority configurations.

[57] *See, e.g.*, Michael, Ross et al., *Law, Power, and the Sovereign State:* The Evolution and Application of the Concept of Sovereignty, Penn State University Press 1995 .

3. The Development of Space Law

The current space law is a relatively new branch of public international law,[58] and has been elaborated under the auspices of the United Nations since the 1960s.[59] Developed over the last few decades, the law consists of five international treaties[60] and principles,[61] and is complemented by relevant UNGA resolutions.[62] It is also developed through regional and bilateral treaties, practices of states and, for the most part, customary international laws.

As a *lex specialis* of international law,[63] space law has its own features, where the law regulates the interests of the international community at large. The law also contains obligations *erga omnes,*[64] however the Outer Space Treaty[65] is considered to be the main charter of space law in practice.

Outer space includes the Moon and other celestial bodies, which are considered both as global commons and yet a humankind heritage. Bruno Simma[66] wrote: "despite its traditional bilateralism structure, international law has entered a stage at which it does not exhaust itself in correlative rights and obligations running between states, but also incorporates common interests of the international community as a whole, including not only states but all human beings".[67]

In other words, treaties and international customary laws still serve space law and are its main legal groundings.[68] The rule of law[69] is also the governance of space law, although the freedom of using space is not absolute.

[58] *See, e.g.*, Healy, Jason, Pitts, Hannan, *Applying International Environmental Legal Norms to Cyber Statecraft*, I/S J. 356, 359-62, 2012 . *See* Kolossov, Y.M., On the Problem of Private Commercial Activities in Outer Space, *27 Roc. COLLOQ. L. Outer Space,* 66 1984 . Dann, Philip, *Future Role of Municipal Law in Regulating Space Related Activities.* In: Space Law: Views for the Future, 132 Zwaan& others ed. 1988 . DeSaussure, H., The Unification and Development of Transnational Space Law, *31 PROC. COLLOQ. L. Outer Space*, 253 1989 .

[59] In 1958, just one year after Sputnik, the General Assembly of the United Nations expressed itself in a Resolution. See UNGA Resolution 1348 XIII of 13 December 1958. That same year, the U.N. Committee on the Peaceful Uses of Outer Space COPUOS was created. Its Legal Subcommittee drafted the legal instruments relating to space activities.

[60] The Outer Space Treaty, the Rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Agreement.

[61] The Declaration of Legal Principles, the Broadcasting Principles, the Remote Sensing Principle, Nuclear Power Sources Principles, and the Benefits Declaration.

[62] Recent resolutions adopted by the General Assembly: A/RES/72/79 2017 , A/RES/72/78 2017 , A/RES/72/77 2017 , A/RES/71/90 2016 , A/RES/70/53 2015 , A/RES/70/230 2015 , A/RES/70/82 2015 , A/RES/69/85 2014 , A/RES/69/38 2014 , A/RES/68/74 2013 , A/RES/68/50 2013 , and A/RES/68/75 2013 .

[63] *lex specialis*, in legal theory and practice, is a doctrine relating to the interpretation of laws and can apply in both domestic and international law contexts. The doctrine states that if two laws govern the same factual situation, a law governing a specific subject matter *lex specialis* overrides a law governing only general matters *lex generalis* . *Yun, Seira, Breaking Imaginary Barriers: Obligations of Armed Non-State Actors under General Human Rights Law – The Case of the Optional Protocol to the Convention on the Rights of the Child, Journal of International Humanitarian Legal Studies, 5 1–2, 213–257, 2014.*

[64] In legal terminology, *ergaomnes* rights or obligations are owed *toward all*.

[65] The *Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.* United Nations, *Treaty Series*, vol. 610, No. 8843.

[66] Bruno Simma, a former Judge of the ICJ 2003-2012 .

[67] Kingsbury, Benedict, Donaldson, Megan, *From Bilateralism to Publicness in International Law* 2010 . ESSAYS IN HONOUR OF BRUNO SIMMA, p. 79, Ulrich Fastenrath, et. al., Oxford University Press, NYU School of Law, Public Law Research, no. 11-07, 2011.

[68] Xinmin, Ma, The Development of Space Law: Framework, Objectives and Orientations, Speech at United Nations/China/APSCO Workshop on Space Law, 2014.

[69] The rule of law between states must be extended to outer space. Otherwise the world will face chaos and disaster. Peace may be at stake. Cooper, J., The Rule of Law in Outer Space, *American Bar Association Journal, 47 1* , 23-27, 1961.

At present, there is no special international convention on space debris [70] and nuclear power sources. [71] The regulation of the relevant international conventions on orbits and spectrum resources are obviously insufficient. [72] In order to cope with the derogation of space's environment and to strengthen the regulation of orbits and spectrum resources, we need to improve the mechanisms on nuclear power sources, [73] space debris, [74] orbits, [75] spectrum resources, [76] and space mining [77] in the near future.

4. Mining Space and the New International Space Order

The governing treaties of space law share many similarities with UNCLOS [78] as protected international commons. [79] Technological progress rapidly changes this state of affairs, and many states [80] are reexamining the fundamental conceptions of sovereignty in space [81] and its status as a protected international commons. [82] The language used in the five principles space law treaties signed between

[70] Kopal, V., Present International Law Principles Applicable to Space Debris and the Need for Their Supplement, Second European Conference on Space Debris, Organized by ESA, held 17-19 March, 1997, ESOC, Darmstadt, Germany, ESA-SP 393., p. 739, 1997 .

[71] However, the Principles Relevant to the Use of Nuclear Power Sources in Outer Space, adopted in 1992 resolution 47/68 , recognizes that nuclear power sources are essential for some missions, but that such systems should be designed so as to minimize public exposure to radiation in the case of an accident.

[72] The Development of Space Law: Framework, Objectives and Orientations, Speech at United Nations/China/APSCO Workshop on Space Law by MA Xinmin, 2014.

[73] Russia has sent about 40 reactors into space and its TOPAZ-II reactor can produce 10 kilowatts. *Zaitsev, Yury, "Nuclear Power in Space", Space daily, 2018.*

[74] Initially, the term *space debris* referred to the natural debris found in the solar system: Asteroids and comets, and the fragments of those larger bodies, also known as meteoroids. *Available at* https://orbitaldebris.jsc.nasa.gov/

[75] An orbit is a regular, repeating path that one object in space takes around another one. An object in an orbit is called a satellite. A satellite can be natural, like Earth or the moon. Many planets have moons that orbit them. A satellite can also be man-made, like the International Space Station.

Available at https://www.nasa.gov/audience/forstudents/5-8/features/nasa-knows/what-is-orbit-58.html.

[76] The "orbit/spectrum resource" refers to the fact that satellites are assigned both a space on the geostationary orbit and a frequency on the radio spectrum. In addition to occupying a physical "slot," a satellite is also assigned a specific frequency in order to avoid interference between transmissions. The dual nature of the orbit/spectrum resource requires that both aspects be exploited simultaneously, and thus the current system to allocate orbits and frequencies necessarily encompasses both aspects. Thompson, Jannat C., Space for Rent: The International Telecommunications Union, Space Law, and Orbit/Spectrum Leasing, *62 J. Air L. & Com. 279* 1996 .

[77] Space mining means the exploitation of raw materials from asteroids and other minor planets, including near-Earth objects. O'Leary, B., Mining the Apollo and Amor Asteroids, *Science:* 197, 363-366, 1977.

[78] The United Nations Convention on the Law of the Sea *UNCLOS* also called the Law of the Sea Convention or the Law of the Sea Treaty is the international agreement that resulted from the third United Nations Conference on the Law of the Sea *UNCLOS* III , which took place between 1973 and 1982.

[79] Global or national commons is a term typically used to describe international, supranational, and global resource domains in which common-pool resources are found. Global commons include the earth's shared natural resources, such as the high oceans, the atmosphere and outer space and the Antarctic in particular. Cyberspace may also meet the definition of a global commons. For further discussion *see Strom, Elinor, Governing the Commons: The Evolution of Institutions for Collective Action, Cambridge, UK: Cambridge University Press, 1990. Neeson, Jeanette M., Commoners: Common Right, Enclosure and Social Change in England, 1700–1820., Cambridge, UK: Cambridge University Press, 1996.*

[80] For a list of current parties to all space treaties, *see* Office for Outer Space Affairs, Status of International Agreements Relating to Activities in Outer Space, last modified January 1, 2001. *Available at* http://www.oosa.unvienna.org/Reports/treaty_status_2001E.pdf.

[81] For more discussion on sovereignty in space *see* Bohumil, Doboš, Outer Space as a Physical Space, *Geopolitics of the Outer Space*, pp. 7-32, 2019. Bohumil, Doboš, Outer Space as a Military-Diplomatic Field, *Geopolitics of the Outer Space,* pp. 33-59, 2019. Morgan, Sterling et al., Can Space Mining Benefit all of Humanity? The resource fund and citizen's dividend model of Alaska, the 'last frontier', *Space Policy* 43, pp. 1-6, 2018. Bruhns, Sara, Haqq-Misra, Jacob, A Pragmatic Approach to Sovereignty on Mars, *Space Policy*, pp. 57-63, 2016. Leib, Karl, State Sovereignty in Space: Current Models and Possible Futures, *Astropolitics, 13:1, 1*-24, 2015.

[82] *Shackelford, Scott J., The Tragedy of the Common Heritage of Mankind, 27 Stan. Envt L. J. 101*. 31 2008 .

1967 and 1981 demonstrates the growth of this new vocabulary. These were the first international treaties to employ the terms "mankind" [83] and "people" [84] rather than "states", [85] "nations", [86] and "international community". [87]

Space law is based on the principle that outer space, including celestial bodies, should remain freely accessible for exploration and use by all people. [88] Early space lawyers were divided on the occupation of celestial bodies. [89] This dispute was addressed by UNGA Resolution 1721 XVI [90] and resolved by the Outer Space Treaty, which proclaimed outer space to be the "province of all mankind". [91]

Nevertheless, humankind realized the need for a formal legal framework to organize mining in space effectively and cautiously. Since mining space became a hope and opportunity for states, it was a critical point for COPUOS [92] to determine this concern in order to legislate upon what is necessary to keep outer space peaceful.[93]

The history of space mining, or so-called asteroid mining began with heightened interests in outer space and the launch of satellites in the late twentieth century. As many became concerned with the depletion of natural resources on Earth, they began to pay more attention to available resources in outer space. For example, a metallic asteroid can potentially provide a state with billions of tons of iron and millions of tons of cobalt, nickel and platinum. [94]

It is clear that space mining will be a more challenging project for smaller developing countries since these projects are extremely costly even for rich developed countries. Another obstacle is technological development since recent technologies are not advanced enough to facilitate commercial outer space mining. [95]

[83] Mankind means human race; human beings collectively without reference to sex; humankind.

[84] Human beings making up a group or assembly or linked by a common interest.

[85] A *state* is a compulsory political organization with a centralized government that maintains a monopoly on the legitimate use of force within a certain geographical territory. ... The term *state* is also applied to federated *states* that are members of a federal union, which is the sovereign *state*. Salmon, Trevor, Imber, Mark, *Issues in International Relations*, ed. 2, UK: Taylor & Francis, 2008.

[86] "Nation" refers to a cultural-political community of people.

[87] *Shackelford*, *supra* note 82, at 31.

[88] The Outer Space Treaty established a series of broad principles that have been elaborated upon and implemented in a series of subsequent international treaties and national laws. These principles include: Outer space and celestial bodies are free for exploration and use by all states.

[89] More discussion on this matter *see* Smirnoff, Michel, Legal Status of Celestial Bodies, *28 J. Air L. & Com.* 385 1962 . Lasswell, Harold, *Anticipating Remote Contingencies: Encounters with Living Forms*, Paper presented to the IVth Colloquium on the Law of Outer Space, Washington, October 3, 1961. Meyer, Alex, *Exploration of Outer Space and Neutrality*, Paper presented to the IVth Colloquium on the Law of Outer Space, Washington, October 3, 1961. Korovine, *Neytralizacii i Demilitarizacii Kosmosa* On the Neutralization and Demilitarization of Outer Space , 5 Mezhdunarodnaya Zhizn, 109-110, Moscow, December 1959. Kopal, Milde, *The Legal Problems of Demilitarization and Neutralization in Outer Space*, Paper presented at the IVth Colloquium on the Law of Outer Space, Washington, October 3, 1961, De Nova, J., *War in Outer Space and Neutrality*, Paper presented to the Congress for Space Law in Taormina, Italy, November 2, 1960.

[90] International co-operation in the peaceful uses of outer space.

[91] Outer Space Treaty, art. 1.

[92] The *Committee on the Peaceful Uses of Outer Space COPUOS* was established by A/RES/1472 XIV of 12 December 1959 as an *ad hoc* committee.

[93] COPUOS, Mining in Space – Square space, Toronto, Canada. Namun, 2017 *Available at* https://static1.squarespace.com/static/.../t/.../COPUOS_+Mining+in+Space.pdf

[94] Coffey, Sarah, Establishing A Legal Framework For Property Rights To Natural Resources In Outer Space, *Case. W. Res. J. Int'l L. 41*, 119-47 2009 .

[95] Davies, Rob, "Asteroid Mining Could Be Space's New Frontier: The Problem Is Doing It Legally." The Guardian , February 6, 2016. *Available at* https://www.theguardian.com/business/2016/feb/06/asteroid-mining-spaceminerals-legal-issues.

In short, outer space has become a more promising idea for many states as they anticipate that more resources can be found and exploited for the potentiality of a shortage of resources on Earth in the near future. It is not only states but also private mining companies [96] that are paying close attention to outer space mining at this time for its large potential profits and gains.

However, it is inevitable that they will breach U.N. treaties such as the Outer Space Treaty and the Moon Agreement, since these treaties ban the ownership of resources and planets of outer space for the sake of peacekeeping in outer space and to negate any potential threat to security on Earth between states.

All in all, the short history of outer space reveals that space mining is a promising future industry if states, of course, deal with the potential industry within the boundaries of the U.N. Charter. [97]

Otherwise, and at the same time, it could be the root cause of further global conflicts and controversies.

The space mining race could lead to conflicts on Earth and will eventually cause considerable international turmoil, since there is no specific resolution or a measure that exclusively discusses the subject of space mining, [98] as it is yet to be fully explored and studied either in a legal and or a technological manner.

However, in the past few years, the U.N. has passed numerous resolutions regarding outer space activities.[99] For instance, it passed Resolution 68/74, [100] Recommendations on National Legislations Relevant to the Peaceful Exploration and Use of Outer Space, in 2013, and Resolution 68/74 specifically clarifies parts of the Registration Convention as it encourages the appropriate national authorities to be in charge of the registry of space objects and the proper authorization of space activities. [101]

[96] *i.e.,* Planetary Resources, Inc., formerly known as Arkyd Astronautics, is an American company that was formed on 1 January 2009, and reorganized and renamed in 2012. Its stated goal is to expand Earth's natural resource base by developing and deploying the technologies for asteroid mining. *Mims, Christopher, Are Ross Perot Jr. and Google's Founders Launching a New Asteroid Mining Operation? Technology Review 2012. Available at* https://www.technologyreview.com/s/427624/are-ross-perot-jr-and-googles-founders-launching-a-new-asteroid-mining-operation/.

[97] The treaties and principals regarding outer space should incorporates the *U.N. Charter by reference*, and requires states parties to ensure that activities are conducted in accordance with other forms of international law such as customary international law the custom and practice of states .

[98] Baseley-Walker, Ben, Outer Space, Geneva and the Conference on Disarmament: Future Directions", *Space Policy 28, no. 1*, pp. 45–49 2012 .

[99] COPUOS, Mining in Space – Square space, *supra* note 93.

[100] Resolution Adopted by the General Assembly on 11 December 2013. United Nations General Assembly 68, no. 74, 1–3 December 11, 2013.

[101] Convention on Registration of Objects launched into Outer Space. The Convention was adopted by resolution 3235 XXIX of the General Assembly dated 12 November 1974, pursuant to resolution 3182 XXVIII dated 18 December 1973 and taking into account the report of the Committee on the Pacific Uses of Outer Space. The Convention was opened for signature on 14 January 1975.

As of now, the U.N. has conducted reports on a variety of issues such as space debris mitigation, [102] near-earth object NEO management, [103] global satellite systems, [104] nuclear power use in outer space, [105] review of outer space treaties, [106] and capacity-building in space law. [107]

As COPUOS noticed a rapid growth in the number of space expeditions and industries, it decided that it was essential for them to discuss a stronger enforcement of space laws and the idea of the rule of law. That being said, COPUOS also felt an urgency to align itself with new developments in space activities, such as mining outer space, so that it would be able to regulate outer space better in the near future. [108] In order to define space exploitation, defining exploitation itself is necessary first of all. Exploitation is '*the action of making use of and benefiting from resources'*. [109] Governments and companies are taking actions in order to prepare themselves to start mining the solar system; two major companies already specialize in mining asteroids and are doing tests and experiments. [110] The Philae landing [111] is the first concrete proof that shows the tangibility of putting a robotic machine on a comet, and space-faring nations like Russia and China are preparing themselves to go back into space and look for the riches of the Moon. [112]

It is crucial to keep in mind the fact that during the drafting of the Outer Space Treaty, the commercialization of space resources was not an issue. Therefore, the lack of clear definitions concerning those activities is comprehensible.

With respect to extraterrestrial exploitation in the Outer Space Treaty, a closer look gives no clear-cut answer as to the regulation of exploitation rights. However, state practices and general opinions in the legal literature show three essential remarks:

[102] *See* the Space Debris Mitigation Guidelines of the Committee on the Peaceful Uses of Outer Space are the result of many years of work by the Committee and its Scientific and Technical Subcommittee. At its thirty-first session, in 1994, the Subcommittee considered for the first time, on a priority basis, matters associated with space debris under a new item of its agenda A/AC.105/571, paras. 63-74.

[103] The International Asteroid Warning Network IAWN and the Space Mission Planning Advisory Group SMPAG are two entities established in 2014 as a result of United Nations endorsed recommendations, and represent important mechanisms at the global level for strengthening coordination in the area of planetary defence. *Available at* http://www.unoosa.org/oosa/en/ourwork/topics/neos/index.html.

[104] The International Committee on Global Navigation Satellite Systems ICG , established in 2005 under the umbrella of the United Nations, promotes voluntary cooperation on matters of mutual interest related to civil satellite-based positioning, navigation, timing, and value-added services.

Available at http://www.unoosa.org/oosa/en/ourwork/icg/icg.html.

[105] The adoption of the Principles Relevant to the Use of Nuclear Power Sources in Outer Space NPS Principle by the General Assembly. A/RES/47/68 85th plenary meeting 14 December, 1992, 47/68.

[106] The review is done through the Outer Space Legal Subcommittee.

[107] Report of the Committee on the Peaceful Uses of Outer Space Fifty-Eighth Session, General Assembly Official Records 70, no. 58, 1–53 June 10-19, 2015 .

[108] *Ibid.*

[109] Merriam-Webster dictionary "Exploitation", 2015.

Available at http://www.merriamwebster.com/dictionary/exploitation.

[110] Hartnett, K., "The comet landing as a prelude to asteroid mining", *The Bosten Globe* November 14, 2014. *Available at* https://goo.gl/AjsDF4.

[111] The Philae Lander, part of the Rosetta mission to investigate comet 67P/Churyumov-Gerasimenko, was delivered to the cometary surface in November 2014. *See* Biele, Jens *et al.,* The landing s of Philae and inferences about comet surface mechanical properties, *Science*, 349 2015 .

[112] Smith, J., "Russia makes plans to mine the moon", *KSL* 2 December 2014. *Available at* http://www.ksl.com/?nid=1012&sid=32515405. Hewitt, J., "China is going to mine the moon forHelium-3 fusion fuel", *Extreme Tech*, January 26, 2015. *Available at* https://goo.gl/n8XSSo.

1. The exploitation of extraterrestrial resources is allowed under the Outer Space Treaty. [113] The freedom of use of outer space and its celestial bodies results in exploitation.
2. The non-appropriation clause in Article II of the Outer Space Treaty only applies to space and its celestial bodies and not to their natural resources. [114] This means that those resources can be subjected to appropriation analogous to that of resources in the deep seabed.
3. Private commercial activities are allowed in space, [115] but states are responsible for any private commercial activities, meaning that commercial entities are also subject to the provisions of the Outer Space Treaty.

For one thing, national appropriation appears to violate international law [116] and the Outer Space Treaty, which states that space "is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." [117] The 1979 Moon Agreement [118] went further, declaring

[113] *See e.g.*, Johnson, D, Limits on the Giant Leap of Mankind: Legal Ambiguities of Extraterrestrial Resource Extraction, *26AmUIntlLRev1477*, 1481 2010–11. Jensen, M, *Asteroidal Nature:* What It Takes to Capture an Asteroid', *45Southwestern Law Review*757, 776 2016. Jakhu, R, Legal Issues Relating to the Global Public Interest in Outer Space, *32Journal of Space Law 31*,37–39 2006 . Also, Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space, G.A. Res. 1962 XVII of 13 December 1963, para 2, U.N. Doc A/RES/1962 XVIII 1 January 1964 . International Cooperation in the Peaceful Uses of Outer Space, G.A. Res. 1721, U.N. Doc A/4987, 20 December 1961 .

[114] In this regard *see* Baca, Kurt, Property Rights in Outer Space, *59 J. Air L & Com.* 1041 1993 . Reynolds, Glenn, International Space Law: Into the Twenty-First Century, *25 Vand. J. Transnat'l L.* 225 1992 . Dasch, Smith, Conference *on Space Property Rights: Next Steps*. In: PROCEEDINGS OF THE 42th COLLOQUIUM ON THE LAW OF OUTER SPACE, 174 2000. Smith, M., *Matching Space-Related Intellectual Rights to Industrial Needs*, ISU International Symposium, Retrospective of the 1996 Symposium November 7, 1996 .

[115] For further read in this matter see Dula, Arthur M., Regulation of Private Commercial Space Activities, *Jurimetrics*, vol. 23, no. 2, pp. 156–189, 1983. Dempsey, Paul, National Laws Governing Commercial Space Activities: Legislation, Regulation, & Enforcement, *36 Nw. J. Int'l L. & Bus.* 1 2016 . Hoffstadt, Brian M., Comment, Moving the Heavens: Lunar Mining and the "Common Heritage of Mankind" in the Moon Treaty, *42 UCLA L. REV. 575*, 580–81 1994 . Dempsey, Paul, *Foreword* to SPACE SAFETY REGULATIONS AND STANDARDS, at xxi Joseph Pelton & Ram S. Jakhu eds., 2010. *See, e.g.*, Gerhard, Michael, National Space Legislation—Perspectives for Regulating Private Space Activities, in *2 ESSENTIAL AIR AND SPACE LAW* 75–76 Marietta Benkö& Kai-Uwe Schrogl eds., 2005 . Ronald L. Spencer, Jr., State Supervision of Space Activity, *63 A.F. L. REV. 75*, 78 2009 . *See* Taghdiri, Adrian, Flags of Convenience and the Commercial Space Flight Industry: The Inadequacy of Current International Law to Address the Opportune Registration of Space Vehicles in Flag States, *19 B.U. J. SCI. & TECH. L. 405*, 514 2013 . Frans von der Dunk, As Space Law Comes to Nebraska, Space Comes Down to Earth, *87 NEB. L. REV. 498*, 507 2008 . Fitzgerald, Paul, notes, "While it is true that domestic law is probably sufficient to cover 'up and down' SATV [suborbital aerospace transportation vehicle] flights, international carriage by SATV will require legal infrastructure, and such a requirement will likely be necessary within the next decade. Unless States begin to consider this issue, it is not inconceivable that such a lack of action could become an impediment to intercontinental flights by SATVs." Fitzgerald, Paul, Inner Space: ICAO's New Frontier, *79 J. AIR L. & COM. 3*, 5 2014. *See e.g.*, Dempsey, Paul, Mineiro, Michael, *The ICAO's Legal Authority to Regulate Aerospace Vehicles*, *in* SPACE SAFETY REGULATIONS AND STANDARDS 251 Joseph Pelton & Ram S. Jakhu eds., 2010 . *See generally* Dempsey, Paul, Mineiro, Michael, *Space Traffic Management: A Vacuum in Need of Law*. In: OUTER SPACE: WARFARE AND WEAPONS P. Kumar, ed. 2010; THE NEED FOR AN INTEGRATED REGULATORY REGIME FOR AVIATION AND SPACE: ICAO FOR SPACE? Ram S. Jakhu, Tommaso Sgobba& Paul Stephen Dempsey eds., Springer 2011 .

[116] For years before the advent of the Space Treaty some authors expressed grave doubts about the applicability of public international law to the realm of outer space. *See, e.g.*, Schick, H., Problems of a Space Law in the United Nations, *13 INT'L & COMP. L.Q.* 977 1944 . Mankiewicz, René, Some Thoughts on Law and Public Order in Space, *2 CAN. Y. B. of INT'L L.* 260 1964 . Cepelka, Cestmir, The Application of General International Law in Outer Space, *36 J. Air L. & Com.* 30 1970 .

[117] Article II of the Outer Space Treaty.

[118] The "Moon Agreement" of 1979. Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, opened for signature December 18, 1979, 18 I.L.M. 1434, 1363 U.N.T.S. 3 entered into force July 11, 1984 . *See* also Hermida, Julian, Legal Basis for National Space Legislation 30 Springer 2004 . Article VI provides: "States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty." Outer Space Treaty, art. VI.

outer space to be the "common heritage of mankind" and explicitly forbidding any state from annexing non-Earth natural resources in the solar system.[119]

Ultimately, it remains clear that land or areas of outer space cannot be owned by anyone, state or non-state. But are space resources subject to the same regulations as land resources? Recent discussions [120] at U.N. COPUOS show that this might not be the case. [121]

The exploitation of a celestial body to the point that it ceases to exist by means of over mining would not constitute, from a legal standpoint, an appropriation in the sense of Article II of the Outer Space Treaty. As noted before, the notion of appropriation is linked to the idea of claiming ownership over a celestial body which would require an intent to appropriate the celestial body. [122] But in the case at hand, it is not the small asteroid *per se* that the mining entity claims but the resources it contains.[123]

The appropriation of a celestial body, in the sense that no one else will be able to use it, is a consequence resulting from over mining. Therefore, it would be a *de facto* appropriation [124] of the celestial body rather than a *de lege* appropriation. [125] Now, as discussed earlier, Article II of the Outer Space Treaty only aims at avoiding *de lege lata* [126] claims by ensuring *inter alia* that no amount of use or occupation gives rights to titles in outer space. Consequently, neither can the extreme use of a celestial body by means of resource extraction.

Without a clear understanding of where space mining activities stand with regards to international space law, the only legal boundary for space mining actors is the one imposed by Article VI of the Outer Space Treaty, [127] namely the obligation for private entities to obtain the authorization of the state before conducting activities in space.

From the state's viewpoint, this minimal requirement can be understood in two significantly different ways. One possibility is to consider that there is currently no restriction on space mining and that

[119] Mining in Space Could Lead to Conflicts on Earth. *Available at* http://nautil.us/blog/mining-in-space-could-lead-to-conflicts-on-earth

[120] In contrast to the law of the sea regime, the Moon Agreement does not provide for a specific institutional structure to govern the Moon's exploitation. It only outlines the main purpose of such a regime, including orderly and safe development, rational management of lunar resources and equitable sharing of the benefits. Schrijver, Nico, Managing the Global Commons: Common Good or Common Sink? *Third World Quarterly, 37: 7*, 1252-1267 2016.

[121] Masson-Zwaan, T., Palkovitz, N., Regulation of Space Resource Rights: Meeting the needs of States and Private Parties, *Questions of International Law35:* 18, 2017. UN COPUOS, para. 231 2017 .

[122] Cherian, Jijo George, Abraham, Job, Concept of Private Property in Space – An Analysis, *Journal of International Commercial Law and Technology*, Vol. 2, Issue 4 2007 .

[123] Leterre, Gabrielle, Providing a Legal Framework for Sustainable Space Mining Activities. *Available at https://wwwfr.uni.lu/.../Gabrielle%20Leterre%20Providing%20a%20Legal%20Frame*

[124] *De facto* taking refers to the *appropriation* of private property by an entity by means other than a formal *appropriation.* Szatkowski, Thomas S., De Facto Takings and the Pursuit of Just Compensation, *48 Fordham L. Rev.* 334 1979 .

[125] *De lege* means being on the basis of new law.

[126] *De lege lata* means the existing law.

[127] [States Parties to the Treaty shall bear international responsibility for national activities in outer space, including the Moon and other celestial bodies, whether such activities are carried on by governmental agencies or by non-governmental entities, and for assuring that national activities are carried out in conformity with the provisions set forth in the present Treaty…]. For further reading *see* von der Dunk, Frans G., The Origins of Authorisation: Article VI of the Outer Space Treaty and International Space Law, *Space, Cyber, and Telecommunications Law Program Faculty Publications*, no. 69 2011.

authorizations can largely be granted until the establishment of another treaty. [128] The other possibility is to consider that any utilization of space resources has to comply with a national legal framework. [129]

Therefore, the future international regime in space mining should recognize the possibility for states and their nationals to appropriate space resources and that general measures should be laid down by –the house of nations, the U.N.,– particularly with relation to the control of any conflict that might arise on Earth regarding outer space mining.

In this framework, the authorization and supervision of space mining missions and their development are left to states under the supervision of the U.N.

5. Property Rights in International Law

Scholars have for a long period of time considered property rights [130] to be of a national level; however, in the years following the establishment of space law, the development led scholars to consider property rights as a global issue.

In recent years, technology has permitted humans to exploit resources in the global commons areas [131] which are outside of the territory of any nation, [132] such as the Earth's atmosphere, outer space, and the high seas. [133]

Because these resources transcend national borders, international regulation is both desirable and inevitable. [134]

In certain situations, the common good of all nations requires the adoption of international constraints on property rights [135] that expressly preempt national law to some extent. [136]

[128] In this matter, I share the opinion of Masson-Zwaan and Palkovitz that "waiting until states reach an international agreement relating to space resource mining would mean giving a hand to an unregulated space industry".

[129] Masson-Zwaan T., Palkovitz, N., Regulation of Space Resource Rights: Meeting the Needs of States and Private Parties, *Questions of International Law,* 35: 18, 2017.

[130] A property right is the exclusive authority to determine how a resource is used, whether that resource is owned by government or by individuals. Alchian, Armen, Some Economics of Property Rights, *Il Politico30, no. 4,* 816-829 1965.

[131] "Areas outside the jurisdiction of any nation or group of nations." Wilson, Phillip E., Barking Up the Right Tree: Proposals For Enhancing the Effectiveness of the International Tropical Timber Agreement, *10 TEMP.INT'L &CoMp. L.J.* 229, 244, 1996. citing Jeffrey L. Dunoff, Reconciling International Trade with Preservation of the Global Commons: Can We Prosper and Protect? *49 WASH. & LEE L. REv.* 1407, 1408 1992 . Also *see* Clancy, Erin A. The Tragedy of the Global Commons, *Indiana Journal of Global Legal Studies* 5, no. 2, 601-19, 1998.

[132] However there are spaces on the Earth that have one of more global common properties, these include: ocean water and sea-bed, air inner atmosphere and outer space, celestial bodies and Antarctica. Further read *see* Wijkman, Magnus, Managing the Global Commons, *International Organization* 36, no. 3, 511-536, 1982. Shii, Naoko, Safeguarding Our Global Commons. In: *From Summits to Solutions: Innovations in Implementing the Sustainable Development Goals*, edited by Desai Raj M., Kato Hiroshi, Kharas Homi, and McArthur John W., Washington, D.C.: Brookings Institution Press, 318-333, 2018.

[133] Sands, Philippe, *Principles of International Environmental Law*, Cambridge University Press, 14 2d Ed. 2003 .

[134] *See*, *e.g.*, Posner, Eric A., Sykes, Eric, O., Economic Foundations of the Law of the Sea, *104 AM. J. INT'L L.* 569, 595 2010. discussing the need for international regulation of ocean resources "to protect against overexploitation, excessive investment in search, and related externality problems" .

[135] Art. 1 of the First Additional Protocol to ECHR has adopted broad concepts of 'possessions' and 'property'.

[136] Sprankling, John G., The Emergence of International Property Law, *90 N.C. L. Rev.* 461 2012 .

Property law stems from four principal sources: regulation of the global commons;[137] coordination of transboundary property rights; [138] adoption of global policies to protect against specific harms; [139] and protection of human rights. [140]

The question is, then, to what extent is property rights protection essential for development to proceed in the global commons? In its most basic form, a property right is an entitlement to exclude someone from doing something. [141]

The Outer Space Treaty indirectly suggests that commercial space companies do not own the rights to any resources, minerals or natural materials [142] they find in outer space. The treaty states that no "celestial body" [143] is subject to "national appropriation by claim of sovereignty, by means of use or occupation, or by any other means." [144]

The Outer Space Treaty established all of outer space as international commons by describing it as the "province of all mankind" and forbidding all nations from claiming territorial sovereignty.

The international Moon Treaty – finalized in 1979, and although just five countries had ratified it by 1984, [145] five was sufficient for it to be considered officially "in force" – went further and forbade private ownership of extraterrestrial real estate.[146]

Although Article II bans appropriation, the provisions of the Outer Space Treaty lend support to property rights. For example, the treaty states that the use and exploration of outer space shall be free and without discrimination of any kind, and that there shall be free access to all parts of space. [147] It also allows the use of equipment and facilities necessary for peaceful activities and allows individuals and nations to retain the private property rights of anything launched into, or built in, space. [148] The Outer Space Treaty supports the proposition that international law [149] is applicable in outer space. [150] As has been described

[137] It is achieved through giving the international agreement more effect.

[138] Sprankling, *supra* note 136, at 461.

[139] Helpman argues that tighter IPRs reduce technology flows from developed countries to developing ones if imitation is the channel of international production transfer. Helpman, E., Innovation, Imitation and Intellectual Property Rights, *Econometrics*, 61 6 , 1247-1280 1993 .

[140] Sprankling, *supra* note 136, at 472.

[141] Dinkin, Sam, Property Rights and Space Commercialization, *SPACE REV.*, May 10, 2004. *Available at* http://www.thespacereview.com/article/141/1

[142] In this respective *See* Lee, Ricky J., *Creating an International Regime for Property Rights Under the Moon Agreement*. In: PROC. 42ND COLLOQUIUM ON L. OUTER SPACE, 409, 409 1999 . Herzfeld, Henry R., Frans G. von der Dunk, Bringing Space Law into the Commercial World: Property Rights without Sovereignty, *6 CHI. J. INT'L L.* 81, 85 2005 . Buxton, Carol R., Property in Outer Space: The Common Heritage of Mankind Principle vs. the "First in Time, First in Right" Rule, *69 J. AIR L. & COM.* 689, 699 2004 . Coffey, Sarah, Establishing a Legal Framework for Property Rights to Natural Resources in Outer Space, *41 Case W. Res. J. Int'l L.* 119 2009 .

[143] Pop, Virgiliu, A Celestial Body is a Celestial Body is a Celestial Body ..." *44 Proc. Coil. L. Outer Sp.* 100, 2001.

[144] Gorove, Stephen, Interpreting Article II of the Outer Space Treaty, *37 Fordham L. Rev.* 1969. White, W.N., Real Property Rights in Outer Space, *40 Proc. Coli. L. Outer Sp. 370*, 1997. Also *see*, for example, Krasner, Stephen, Think Again: Sovereignty, *122 Foreign Policy* 20, 2001.

[145] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, this treaty was adopted on 5 December 1979 *1363 U.N.T.S. 3* .

[146] Virgiliu G. Pop, *Who Owns the Moon?: Extraterrestrial Aspects of Land and Mineral Resources Ownership*, Springer Publishing, pp. 2–3, 2009.

[147] Outer Space Treaty Art. I.

[148] Outer Space Treaty Art. IV.

[149] Wherever international law is applied successfully, relative anarchy turns into relative peace and security. *See generally* Cassese, Antonio, *International Law* 117-126 2001 .

[150] Cepelka, Cestmir, Gilmour, Jamie H., The Application of General International Law in Outer Space, *36 J. AIR L. &CoM. 30*, 30 1970 . "[General international law, which governs the conduct of states in their mutual relations, is not confined to the

[151] property has two fundamental aspects. The first is possession, [152] which can be defined as control over a resource. The second is title, [153] which is the expectation that others will recognize one's rights to control [154] a resource. [155] The expectation of profit from improving one's stock of capital rests on this control through private property rights. [156] The belief is that these rights encourage property holders to develop, generate wealth, improve standards of living, and efficiently allocate resources through a capitalist market system. [157]

6. Property Rights in Outer Space

Considering the above, the United Nations Committee on the Peaceful Uses of the Outer Space UNCOPUOS introduced several treaties like the Outer Space Treaty, the Moon Treaty, the Rescue Treaty, the Liability Treaty and the Registration Treaty, declaring outer space to be *res communis*, where all entities have common access to the resources that are contained within it and are precluded from making any claims of ownership thereto. The approach of *res nullis* [158] was rejected, as it would have proclaimed outer space to be available for conquest. However, these treaties encourage the exploration of outer space for peaceful purposes. While national appropriation is expressly not allowed, there is no mention about private ownership of celestial bodies.

However, it is not just human nature to explore and use resources, it is economically beneficial for human beings to explore and exploit property beyond Earth. Simply put, outer space cannot be appropriated by any state; the objects launched by any state are considered to be the property of that state.

Hence, for example, the satellites launched by the U.S. are considered to be the national property of the U.S. However, outer space follows the concept of *res communis*, [159] not *res nullis*.[160]

Outer space is for everyone's enjoyment and exploitation and no one person can claim it as their own. [161] The resources of the high seas, *i.e.*, the deep seabed [162] , similar to the resources detected in celestial

ill-defined upper limit of national airspace, but is applicable to activities of states in the vast realm of outer space. Thus the Space Treaty incorporates rule of general international law, apart from norms of *legis*
Specialis derogating there from]."

[151] In *The Common Law* Oliver Wendell Holmes describes property.

[152] The right of possession leads to: the right of control, the right of exclusion, the right of enjoyment and the right of disposition.

[153] The property is owned by whoever holds the title.

[154] Within the laws, the owner controls the use of the property.

[155] Holmes, Oliver, *The Common Law*, 243 2004 . *See generally* White, G. Edward, The Rise and Fall of Justice Holmes, *39 U. CHI. L. REV.* 51 1971 .

[156] This view is according to Adam Smith.

[157] De Soto, Hernando, *The Mystery of Capital: Why Capitalism Triumphs in the West and Fails Everywhere Else*, New York: Basic Books, 39-67 2000 .

[158] *Res nullius* is ownerless property and it can be owned by any person. The person who takes first possession of the *res nullius* is the owner of that property. *Res nullius* includes wild animals and abandoned property. *Res nullius* also refers to the principle by which a nation may assert control of an unclaimed territory. *Available at* https://definitions.uslegal.com/r/res-nullius/

[159] "Thing of the entire community." The common heritage of all humankind, not subject to the appropriation by or sovereignty. *Available at* https://goo.gl/8LkkUq

[160] Listner, Michael, The Ownership and Exploitation of Outer Space: A look at Foundational Law and Future Legal Challenges to Current Claims, *1 Regent J. Int'l L.* 75, 2003.

[161] *Ibid*, at 75.

[162] In this area of the Law of the Sea, *see* Burton, Steven J., Freedom of the Seas: International Law Applicable to Deep Seabed Mining Claims, *Stanford Law Review* 29, no. 6, 1135-1180 1977 . Johnston, Cheryl Hein, Deep Seabed Mineral Resources Act, *Natural Resources Journal* 20, no. 1, 163-168 1980 .

bodies, enjoy a specific nature that excludes them from the general characterizations attributed to celestial bodies and outer space as a whole; both areas have been characterized as areas *res communis omnium*, [163] since both legal regimes that govern them require them to be beyond state sovereignty and at the same time to be commonly used by humankind. [164]

7. Regulating the Space in the Age of Mining

"The rule of law … affects our business, our property and our families. It provides for and protects our liberties. The rule of law guarantees freedom for men and diversity of ideas as expressed by free people. The alternative to the rule of law – a rule of force whenever by one man or a group of men – means the oppression of men and the suppression of ideas". [165]

Humans live in parallel in both framework of international legal orders [166] and in a diverse fabric in the international community. However, nationals of any given nation cannot act on their own and require legal entities – states – to represent their legal interests and to protect their rights.

States, [167] as subjects of public international law, are the main actors in the international arena. It is best seen, on this particular level of international coexistence, that respect for the law and international commons in general bring greater freedom and peace while a lack respect for such rules and commons will diminish the freedom and peace which we all enjoy by sharing our global heritage.

Ever since the very first human interactions, between one human and another on one side of the coin and between humans and things on the other side, international law has been evolving throughout human civilizations. When the oceans became a subject of interest for mankind, [168]

–law of the sea– emerged. [169] The same goes for the dawn of the outer space era the scope of international law had to move beyond Earth, which coupled with the great inventions in technology, has led to the emergence of a new body of international space regulations.

[163] See *supra* note 158.

[164] Evidential is Art. 11, para. 8 of the Moon Agreement that requires equal sharing of the natural resources exploited in outer space: "An equitable sharing by all States Parties in the benefits derived from those resource […]."; *see* also, Cocca, Aldo, The Principle of the Common Heritage of Mankind as Applied to Natural Resources from Outer Space and Celestial Bodies", *Proceedings of XVIth colloquium on the law of outer space*, 174 IISL, 1973 . Barbara, Ellen, Exploring the Last Frontiers for Mineral Resources: A Comparison of International Law Regarding the Deep Seabed, Outer Space, and Antarctica, *23 Vand. J. Transnat'l L. 819*, at 822, 1990-1991 . For the respective nature of the natural resources of the sea *see* Art. 137 of the UNCLOS which states: "1. No State shall claim or exercise sovereignty or sovereign rights over any part of the Area or its resources, […]. No such claim or exercise of sovereignty or sovereign rights nor such appropriation shall be recognized. 2. All rights in the resources of the Area are vested in mankind as a whole, on whose behalf the Authority shall act. […]."

[165] As the honorable William Pierce Rogers, attorney general of the United States in the years 1957 - 1961, stated in his official address on the occasion of the 1st U.S. Law Day on May 1, 1958.

[166] Further read regarding international legal order *see generally* Cogan, Jacob Katz, The Idea of Fragmentation, *Proceedings of the Annual Meeting American Society of International Law* , vol. 105, pp. 123–125, 2011. Slaughter, Anne-Marie, Burke-White, William, The Future of International Law is Domestic or, The European Way of Law , *47 Harv. Int'l L.J. 327*, 329 2006 . Owada, Hisashi, Problems of Interaction between the International and Domestic Legal Orders, *5 Asian J. Int'l L. 2*, 247 2014 .

[167] As Antonio Cassese puts it, "most activities performed by the primary subjects of the world community, States, take place within a geographical area. Cassese, Antonio, *International Law*, 2nd ed., Oxford University Press, 2005.

[168] For discussion of the interactions *see* Brunner, A.D., El Niño and World Primary Commodity Prices: Warm Water or Hot Air? *The Review of Economics and Statistics 84 1* , 176-183 2002 . Waite, R., et al., *Coastal Capital: Ecosystem Valuation for Decision Making in the Caribbean*, World Resources Institute Washington, DC. 2014. *Available at* https://www.wri.org/publication/coastal-capital-ecosystem-valuation-decision-making-caribbean

[169] Today, the principal legal instrument is the 1982 United Nations Convention on the Law of the Sea. For further developments in the law of the sea *see* Simmonds, Kenneth R., The Law of the Sea, *The International Lawyer* 24, no. 4, 931-

Throughout the centuries, humans have lived by the motto "*dominus soli est dominus coeli"*, [170] meaning "the master of the land is also the master of the skies". Furthermore, Hugo Grotius, in his opus *The Free Sea Mare Liberum* , [171] formulated a new principle the sea was international territory and all nations were free to use it for seafaring trade.[172]

According to Grotius, "the sea was free to all, and nobody had the right to deny others any access to it". Seas were seen by Grotius as "similar in nature to air and, unlike land, were deemed the *common property of all"*. [173]

Recently, the sky is no longer the limit of state sovereignty; however, there are certain kinds of territories that are recognized in international law as falling outside the territory of a given state. These include the high seas; the international seabed, its soil and its subsoil; Antarctica and outer space.

Contemporary states are supposed to ensure that any exploitation of these particular areas is solely for peaceful purposes and for the benefit of all mankind.

Turning to the *res communis*, the concept consists of five main elements:

a) The absence of the right of appropriation; [174]
b) The duty to exploit resources in the interests of mankind in such a way as to benefit everyone, [175] including developing countries;
c) The obligation to explore and exploit [176] for peaceful purposes only;
d) The duty to pay due regard to scientific research; [177]
e) The duty to protect the environment. [178]

956 1990 . Oxman, Bernard, The Territorial Temptation: A Siren Song at Sea, *The American Journal of International Law100, no. 4*, 830-851 2006 .

[170] *Cuius est solum, eius est usque ad coelum et ad inferos,* Latin for whoever's is the soil; it is theirs all the way to Heaven and all the way to Hell . *Jackson Mun, Airport Auth. v. Evans*, 191 So. 2d 126, 128 Miss. 1966. transcribing doctrine as "ad inferos" . Hepburn, Samantha J., Ownership Models for Geological Sequestration: A Comparison of the Emergent Regulatory Models in Australia & the United States, *44 ENVTL. L. REP. NEWS & ANALYSIS*, 310-313, 2014 . translating phrase as "whoever owns [the] soil, [it] is theirs all the way [up] to Heaven and [down] to Hell" .

[171] *Mare liberum* Leiden: Elzevier, 1609 . Reprinted and translated many times since. The translation and edition by Ralph van Deman Magoffin Oxford: Oxford University Press, 1916, contains a facsimile of the 1633 edition. *See* also the recently published *The Free Sea; trans. by Richard Hakluyt with William Welwod's critique and Grotius's reply*, edited and with an introduction by David Armitage Indianapolis: Liberty Fund, 2004 . Grotius, Hugo, *Mare Liberum, The Free Sea* 1609 ; Martinus Nijhoff, Bilingual edition 2009 .

[172] Mare Liberum, Peace Palace Library. *Available at* https://www.peacepalacelibrary.nl/imagecollection/mare-liberum/

[173] Grotius, H., The '*Freedom of the Seas,'* Tran's. Scott, J.B., *Latin and English version, Magoffin trans.* 1608 .

[174] For further read in the right of appropriation *see* Virgiliu, Pop, Appropriation in Outer Space: the Relationship between Land Ownership and Sovereignty on the Celestial Bodies, *Space Policy, Vol. 16, Issue 4,* PP. 275-282 2000 .

[175] Tennen, Leslie, Outer Space: A Preserve for All Humankind, *2 Hous. J. Int'l L.* 145 1979-1980 .

[176] Further analyses *see generally* Trimble, James, International Law of Outer Space and its Effect on Commercial Space Activity, *11 Pepp. L. Rev*. 3 1984 .

[177] NASA was created by the National Aeronautics and Space Act of 1958 NAS Act , 42 U.S.C. §§ 2451-2484 1976 & Supp. V 1981 . Space efforts dealing with weapons systems, military operations, or defense are reserved to the Department of Defense, subject to the direction of the President. 42 U.S.C. § 2451 b 1976 .

[178] Private enterprise has always been expected to participate in the use and exploitation of outer space. *See* Christol, C., *Modern International Law of Outer Space*, Xi 1982 . Menter, Martin, *Legal Regime of International Space Flight.* In: Space Shuffle and the Law, 61 S. Gorove ed. 1980. "It is thus apparent that the 1967 Treaty envisions activities in space by private enterprise" . For a discussion of the Soviet Union's attempt to exclude private enterprise from outer space, and the United States' response, *see* Dula, Arthur, *Management of Interparty and Third-Party Liability for Routine Space Shuttle Operations.* In: SPACE SsurrrLE AND THE LAW 93, 95 S. Gorove ed. 1980 . Dula, Arthur, Regulation of Private Commercial Space Activities, *23 JURIMETRICS J. 156*, 172 1982 . *See* also Jaksetic, E., The Peaceful Uses of Outer Space: Soviet Views, *28 Am. U.L. REV.* 483 1979 . a discussion of the Soviet Union's views on space law in general . Trimble, *supra* note 176, at. 3.

Turning to the international agreements more closely, the Moscow Treaty, [179] or the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, was signed and ratified by the governments of the Soviet Union, United Kingdom and the United States in 1963. As a consequence, states have agreed to apply the international law principles of *res communis* to ensure the preclusion of the national appropriation of outer space and any of the celestial objects by claim of sovereignty.

The United Nations General Assembly, in its efforts to promote international cooperation in the field of outer space, adopted a number of resolutions regarding this matter, among them: Resolution 1472 XIV of 1959 establishing the Committee on the Peaceful Uses of Outer Space COPUOS ; [180] Resolution 1721 XVI of 1961 International Co-operation in the Peaceful Uses of Outer Space; [181] Resolution 1962 XVIII , the Declaration of Legal Principles Governing the Activities of States in the Exploration and Uses of Outer Space of 13 December 1963; [182] Resolution 37/92 regarding Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting of 10 December 1982; [183] Resolution 41/65 regarding the Principles Relating to Remote Sensing of the Earth from Outer Space of 3 December 1986; [184] Resolution 47/68 regarding the Principles Relevant to the Use of Nuclear Power Sources in Outer Space of 14 December 1992; [185] and Resolution 51/122 regarding the Declaration on International Cooperation in the Exploration and Use of Outer Space for the Benefit and in the Interest of All States of 13 December 1996. [186]

As an outcome of U.N. efforts aimed at regulating the conduct of states that undertake space exploration, the following international treaties have been negotiated and drafted under the auspices of UNCOPUOS: the 1967 Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies known as "Outer Space Treaty" ; [187] the 1968 Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space the Rescue Agreement ; [188] the 1972 Convention on International Liability for Damage Caused by Space Objects the Liability Convention ; [189] the 1975 Convention on the Registration of

[179] Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, Moscow, August 5, 1963, *The American Journal of International Law* 57, no. 4 1963 .

[180] Further read and analysis *see* Zahoor, Saadia, Maintaining International Peace and Security by Regulating Military Use of Outer Space, *Policy Perspectives*, vol. 14, no. 2, pp. 113–135, 2017.

[181] Resolutions adopted by The United Nations General Assembly: 1721 XVI . International Co-operation in the Peaceful Uses of Outer Space, *Bulletin of the American Meteorological Society* 43, no. 4 1962 .

[182] Aerospace Law: Progress in the UN. In: *Explorations in Aerospace Law: Selected Essays, 1946-1966*, edited by Vlasic Ivan A., and Cooper John Cobb, 327-38, Montreal: McGill-Queen's University Press, 1968.

[183] Resolution adopted by the General Assembly: 37/92. Principles Governing the Use by States of Artificial Earth Satellites for International Direct Television Broadcasting, *The American Journal of International Law* 77, no. 3, 733-36. 1983 .

[184] Nirmal, B.C., Legal Regulation of Remote Sensing: Some Critical Issues, *Journal of the Indian Law Institute54, no. 4*, 451-79 2012 . Hanley, Colleen, Regulating Commercial Remote Sensing Satellites over Israel: A Black Hole in the Open Skies Doctrine? *Administrative Law Review52, no. 1*, 423-442 2000 . Szawlowski, Richard rev , *Remote Sensing of the Earth from Outer Space in the Light of International Law, The American Journal of International Law*, vol. 84, no. 2, pp. 626–627, 1990.

[185] Christol, C., United Nations: General Assembly Resolution and Principles Relevant To The Use Of Nuclear Power Sources. In: Outer Space, *International Legal Materials* 32, no. 3, 917-926 1993 . Nirmal, B.C. Legal Regulation of Remote Sensing: Some Critical Issues, *Journal of the Indian Law Institute54, no. 4*, 451-79 2012 .

[186] Resolution 51/122 of 13 December 1996. Many scholarly written articles on the resolution, *i.e., see* Dean, Jonathan, *Future Security in Space: Commercial, Military, and Arms Control Trade-Offs*. [Report] Edited by Moltz James Clay, James Martin Center for Nonproliferation Studies CNS , pp. 3-7, 2002. Khan, Saeed, Space Law for Peace: A Critical Review, *Pakistan Horizon* 59, no. 2, pp. 83-106 2006 .

[187] Further analysis of the treaty; *see* Annette Froehlich, et al., *A Fresh View on the Outer Space Treaty*, Springer, Vienna 2018.

[188] For further discussion on the agreement *see* Gorove, Stephen, The Recovery and Return of Objects Launched into Outer Space: A Legal Analysis and Interpretation, *The International Lawyer* 4, no. 4, 682-694, 1970.

[189] Convention on International Liability for Damage Caused by Space Objects opened for signature 29 March 1972. Entered into force 1 September 1972: 10 ILM 965 1971 : 24 UST 2389: TIAS 7762: 961 UNTS 187.

Objects Launched into Outer Space the Registration Convention , [190] and the 1979 Agreement Governing the Activities of States on the Moon and Other Celestial Bodies the Moon Treaty . [191]

We now turn to the question of how space mining should be regulated. The Outer Space Treaty is geared toward nations, but in *theory* it might not apply to private companies. [192]

At the same time, the treaty also specifies that states are responsible for ensuring that private individuals and corporations within their borders abide by all the terms of the treaty. This means that the states would be forced not to allow private companies, [193] for instance, to exert any claims of ownership or exploitation.

On the same level, there is another provision in the Outer Space Treaty, which states that "Outer space, including the Moon and other celestial bodies, shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law, and there shall be free access to all areas of celestial bodies." [194] Now, does *mining* fall under *use*? [195] The answer might be yes to some, [196] and the argument here is that any material extracted from celestial bodies belongs to the entity that performed the extraction.

States may undertake space mining operations on their own, allow private companies to carry out such activities or participate in the space mining operations of international organizations.

However, in the latter case, the responsibility for the adoption of and compliance with safety standards would be borne both by the international organizations and by the states participating in such organizations. [197]

Similarly, if two or more states jointly undertake space mining activities, [198] each state will be expected to adopt and impose space mining safety standards [199] and procedures.

One of the many phases required in the regulation of space is to address a uniform international regulatory system for space mining, and that could be the ratification of the Moon Agreement in order that states can abide by what I suggest is called an "outer space governance".

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[190] In the historical context of the treaty *see* von der Dunk, Frans G., The Registration Convention: Background and Historical Context, *Space, Cyber, and Telecommunications Law Program Faculty Publications*, 32, 2003.

[191] Agreement Governing the Activities of States on the Moon and Other Celestial Bodies Moon Agreement , New York, done 18 December 1979, entered into force 11 July 1984; *1363 UNTS 3; ATS 1986 No. 14; 18 ILM* 1434 1979 .

[192] In private companies and exploring the space *see* Simberg, Rand, Property Rights in Space, *The New Atlantis*, no. 37, pp. 20-31 2012 .

[193] Blount, P.J., Renovating Space: The Future of International Space Law, *Denv J Intl L & Pol'y* 515-532, 2011. Marks, P., Who Owns Asteroids or the Moon? 2 *New Scientist* 28-29, 2012 . Mincke, W., Objects of Property Rights. In: Van Maanen GE and Van der Walt AJ eds . *Property Law on the Threshold of the 21st Century*, MAKLU Uitgevers Antwerpen, 651-668, 1996. Reynolds, GH. Merges, R.P., *Outer Space: Problems of Law and Policy*, 2nd ed Westview Press Boulder 1998. Wasser, A., Jobes, D., Space Settlements, Property Rights, and International Law: Could a Lunar Settlement Claim the Lunar Real Estate It Needs to Survive, *J Air L & Com* 37-78, 2008.

[194] Article 1 of the Outer Space Treaty.

[195] For a detailed discussion on this subject, see Jakhu, Ram S., Pelton, Joseph N., *Space Mining and its Regulation*, New York, Springer Press 2016 .

[196] The case of NASA which claimed ownership of 842 pounds of lunar rock collected during the Apollo missions.

[197] Outer Space Treaty, article VI.

[198] It is recently reported that the "Luxembourg Government will work with Deep Space Industries [from the U.S.]…. to develop the technology needed to mine asteroids and build a supply chain of valuable resources in space." *See* "Prospector-X™: An International Mission to Test Technologies for Asteroid Mining," online Deep Space Industries. *Available at* https://goo.gl/s3Th74.

[199] *i.e.*, the U.S. Commercial Space Launch Competitiveness Act CSLCA . The bill does not allow ownership of an asteroid, or a swath of the moon, or any other section of extraterrestrial real estate — just the resources extracted from such a body.

However, the success of outer space mining will depend upon the appropriate and timely determination of solutions to the following issues:

(a) What are the potentially positive global benefits to space mining that might be derived and equitably shared through future regulation?

(b) What are the major safety risks in space mining, and how should safety standards and procedures be formulated and implemented and by whom?

(c) What would be the legal consequences for non-compliance with such standards and procedures?

For the time being these questions are largely theoretical; however, it is difficult to discuss outer space resources, minerals and even debris without some understanding of the central role played by international law.[200] It is not practical in this paper, however, to attempt to survey all of the international rules, institutions, arrangements, and procedures bearing on natural resource policies and issues in outer space.

The adoption of national laws, like the U.S. SREU Act of 2015, [201] are the first important steps for initiating a governance system as they provide a national regulatory basis for the licensing process and continuous supervision of, and the imposition of safety standards and procedures upon, the space mining activities of private companies.

At best, the challenge will be to implement these laws in such a way that would not breach the international obligations of the concerned states.

Since space mining operations will take place in the international environment of outer space or on celestial bodies including asteroids, it would seem logical that safety standards and procedures are international, national and comprehensive in their nature and scope so that all interests of states space faring and non-space faring remain protected. It would also be prudent for these standards and procedures to use common metrics and interfaces so that rescue or repair operations could be more easily achieved. [202]

Following on from the discussion in the preceding part, it is clear that innovation and space mining is exorbitant and if a state invests in this enterprise, it will need protection. [203] This is where property law comes in. In referring to Bentham [204] and Locke, [205] Rose [206] underlines the essential argument for the protection of property interests. “[P]eople will not work much without some inducement, and if there is no such inducement to labor, resources lie undeveloped and total wealth remains low. What induces people to labor? Property does. Let people have secure property, and they will learn to invest their labor

[200] Bilder, Richard, International Law and Natural Resources Policies, *20 Nat. Resources J., 451,* 1980 .

[201] Space Resource Exploration and Utilization Act of 2015, *51 U.S.C.A. 513 §51303.* Further reading on the Act, *see generally* National Space Policy of the United States of America 2010 . *Available at* https://goo.gl/qiWcZA HR 1508 - Space Resource Exploration and Utilization Act of 2015 Purpose and summary – need for legislation .

[202] Jakhu, Ram S., Pelton, Joseph N., Regulation of Safety of Space Mining and its Implications for Space Safety, *Journal of Space Safety Engineering*, Vol. 3 No. 2, pp. 67-72 2016 .

[203] Here there is the need to rethinking *terra nullius* and property law in space. The terra nullius literally a ‘land belonging to nobody’. For further reading in this matter *see* Banner, Stuart, Why Terra Nullius? Anthropology and Property Law in Early Australia, *Law and History Review23, no. 1,* 95-131 2005 .

[204] Bentham, J., “Principles of the Civil Code”. In: Bowring, J., ed *The Works of Jeremy Bentham, Vol I.,* William Tait Edinburgh, pp. 297-364 1864 .

[205] Locke, J., Laslett, P., *Two Treatises of Government* Cambridge Texts in the History of Political Thought , 3rd Edition, Cambridge University Press Cambridge 1988 .

[206] Rose, Carol, Property as the Keystone Right? *71Notre Dame L Rev* 329-369 1996 .

on the things that they own, because they themselves will take the rewards. Once able to trade, they will invest even more in socially useful activities, because the whole world becomes the market for their efforts." [207]

However, ownership is considered to be the right that gives one the most comprehensive set of rights. [208]

So, dealing with property in outer space, as mentioned and referenced above with regard to the common heritage of mankind principle, relates to the international management of resources *within* a territory, rather than the territory itself [209]

Looking at the big picture, the "freedom of scientific investigation ... [allows states to] collect on and remove from the moon samples of its mineral and other substances," [210] "on or below [the moon's] surface. [211] The Outer Space Treaty further states that "[s]uch samples shall remain at the disposal of those States Parties which caused them to be collected and may be used by them for scientific purposes." [212]

8. Conclusion

Having considered the issues relating to the development of and needs for space-focused regulations in the area of space mining, it is clear that outer space is considered a common heritage of mankind and there is no state that can declare ownership thereof; rather, other than any use for peaceful purposes, space itself is protected.

Life on Earth shows that physical evolution results when a *need* arises. However, man's broad acceptance of a common heritage approach to land and its resources demands a *psychological* evolution rather than a physical change mandated by his environment. [213] As a solution, the international community could agree to abstain from exploitation for a period of time, as in the Antarctic Treaty. [214]

Evidently, the problem of legal regulations still remains, as there needs to be a safe and clear legal progression for the private enterprise of different nations to thrive and settle disputes. Also, even setting aside the common heritage of mankind principle and following the factual provisions of the Outer Space Treaty, one must bear in mind the safety reasons behind regulations and avoid excess expense on space activities.

[207] Erlank, W., *Property Rights in Space: Moving the Goal Posts so the Players don't Notice*, Potchefstroom Electronic Law Journal, Vol 19, p. 17 2016 .

[208] These rights are sometimes referred to as "competencies" that relate to an object.

[209] Joyner, Christopher C., The Concept of the Common Heritage of Mankind in International Law, *13 Emory INT'L L. Rev.* 615, 620 1999 .

[210] The Moon Treaty, art. 6. Allows promotion.

[211] *Ibid.*, art. 6, 8. Allows exploitation.

[212] *Ibid.*, art. 6.

[213] Buxton, Carol R., Property in Outer Space: The Common Heritage of Mankind Principle vs. the First in Time, First in Right, Rule of Property, *69 J. Air L. & Com.* 689, 2004 .

[214] *See* Naval Treaty Implementation, Antarctic Treaty. stating that representatives of twelve nations signed the Antarctic Treaty on December 1, 1959, and the treaty became effective in 1961 . Those original signatories were: Argentina, Australia, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, United Kingdom, United States and the USSR. The Antarctic Treaty applies to the area south of 60' South latitude. Through this agreement, the countries active in Antarctica consult on the uses of the whole continent, with a commitment that it should not become the scene or object of international discord. *Available at* www.nawcwpns.navy.mil/treaty/Ant.html.

First of all, with regard to the safety of mining operations or other space activities, the question is, will its regulation be easy? One may say yes, and I would regard this answer as relating to the progress of technology and to the progress of international law above all. It is unquestionably true that today's technology is not yet as advanced as it hopefully will be in the field of mining equipment, as such equipment must not create space debris.

Russia on the other hand, has its own regulations on establishing safety zones around space installations and objects. That is to say, it does not constitute appropriation "by other means", as its purpose is the safety of any third party equipment, personnel or the facility/vehicle itself. One would not like unauthorized personnel to go near the mining site due to the risk of injury, damage, or death.[215]

In conclusion, I must emphasize that there is a need for a broader discussion on ways in which all entities can participate in deep space endeavors, and coming to terms on this may require an agreement similar to the one established with the International Space Station Inter-governmental Agreement of 1998. Humanity already carries the burden of space exploration, and every new approach is a new frontier, that will benefit all humanity.[216]

[215] Muzyka, Kamil, The common burden of "spacemankind", 2017. *Available at* http://www.thespacereview.com/article/3279/1

[216] *Ibid.*

CRAB Technology Platforms and CRAB Technology Based Smart Contracts. Benefits, Ways of Application, Legal Challenges and Future Development

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The present paper explains the role of the CRAB (Create, Retrieve, Append, Burn) technology platforms and CRAB technology-based smart contracts for modern governmental activity and private business - from commercial models based on decentralized applications to official registration services on governmental platforms, focusing on real-life examples worldwide, in order to understand possible ways of application of CRAB technology in global perspective. Current research examines in details the various applications of CRAB technology and analyses legal challenges arising with the widespread of CRAB technology-based smart contracts in the connection with already existing legal frames – digital currencies regulation, investment activity regulations, consumer protection or litigation and dispute resolution. Present paper analyses gaps in existing legal procedures, stresses on necessity of new legal models in order to regulate smart contract-based commercial activity and underlines the importance of amendments acceptance to current international legislation with the focus of new developments of CRAB technology smart contract platforms and decentralized applications to straighten the financial market, secure competition, protect consumers and investors.

Keywords: CRAB technology, smart contract, decentralized application, digital currency

1. Introduction

In the modern age with the fast development of CRAB (Create, Retrieve, Append, Burn) technology many CRAB (Blockchain or Distributed Ledger Technology) based platforms exist, from private ones, aimed at managing decentralized application and decentralized organizations, to governmental ones, aimed at managing national commercial operations. In the present paper, the author will focus on the possible benefits for society and the legal challenges arising in connection with such application of CRAB platforms and CRAB-based smart contracts.

In the same form as a decentralized market drives economic development, decentralized organization and decentralized application, based on CRAB platform can drive up both technological and legal progress, create a new field of law, such as Crypto law, and lead to a reform of the existing legal system. New ways for governmental and private services can also become available with the Create, Retrieve, Append, Burn Technology, CRAB-based community driven smart contracts and decentralized platforms - from voting system and community certified marriage to crowdfunding and fact-checking. In Part 2 the author will investigate possible ways of application of CRAB platforms on a private and public level, its benefits and prospective ways of application for modern society.

With CRAB platforms the conclusion of a contract became possible with maximal security and with a minimum of transaction costs. However, there are not only benefits for contracting parties, but also legal issues connected to legal regulations and legal enforceability of such CRAB contracts, which in the future could make the reorganization of all existing legal frameworks and legal structures related to contracts necessary. In Part 3 the author will investigate possible benefits, gaps in current legislation and possible ways of development for regulating the legal aspect of CRAB-based smart contracts.

The present paper is important both for legislators and for practitioners in order to understand legal gaps in existing legal frames, to draw the way for possible solutions in order to regulate the area of CRAB based smart contracts and to use all benefits of such technology on a public and private level.

2. CRAB Technology Platforms for Smart Contracts. Benefits and Ways of Application

Modern society is on its way to decentralized governance. Driven by the community, CRAB is makes it possible to store all data, like identity cards, evidence, passports and contracts in a decentralized and secure way[1], to allow the provision of more personalized services with a usage of smart contracts on available CRAB platforms.

CRAB based smart contracts are functioning on private and public CRAB platforms. Private CRAB projects, such as NEO[2], Ethereum[3] or Zilliqua[4] position themselves as CRAB platforms allowing users to create crypto assets, to operate them with the usage of smart contracts, even to create special tools for investment or crowdfunding. Therefore, Create, Retrieve, Append, Burn Technology estabished a new tool available for private and public services in numerous different areas, which will be discussed further.

Together with the creation of CRAB platforms the new kind of business was born – decentralized applications (or dapps[5]) and decentralized organizations (or DAO)[6]. Mentioned CRAB platforms create new digital economy, as to operate in such platform, or to conclude smart contracts (which will be discussed in Part 3) the user has to create digital identity (without personal data usage, totally anonymously) and digital assets (crypto tokens)[7]. Ways of application of such CRAB platforms are diverse and limited only by technological progress.

Decentralized applications managed by private CRAB platforms represent a wide range of business activity from distributed exchange platforms for smart contracts such as the IDEX dapp[8], or fact checking platforms for news (fact checking paid by crypto tokens using smart contracts) as the Decentralized News Network dapp[9], to breeding crypto pets as collection items or for sale (using smart

[1] Atzori, M., *Blockchain Technology and Decentralized Governance: Is the State Still Necessary?*, 2015, p.8, available at: https://ssrn.com/abstract=2709713, (last visited 10 October 2018).

[2] Official description of NEO platform, available at: https://neo.org/, (last visited 4 October 2018).

[3] Official description of Ethereum platform, available at: https://www.ethereum.org/, (last visited 4 October 2018).

[4] Official description of Zilliqua platform, available at: https://zilliqa.com/, (last visited 4 October 2018).

[5] Ranking of dapps, available at: https://www.stateofthedapps.com/rankings, (last visited 4 October 2018).

[6] Ethereum White Paper, available at: http://blockchainlab.com/pdf/Ethereum_white_paper-a_next_generation_smart_contract_and_decentralized_application_platform-vitalik-buterin.pdf (last visited 10 October 2018).

[7] Official description of NEO platform.

[8] Official description of IDEX dapp, available at: https://idex.market/eth/aura, (last visited 4 October 2018).

[9] Official description of DNN dapp, available at: https://dnn.media/, (last visited 4 October 2018).

contracts) like in the CryptoKitties dapp[10], or creating one's own universe, trade planets and space ships (using smart contracts) like in the 0xUniverse dapp[11]. According to Ethereum White Paper, decentralized application are possible of three types: money exchange platform (possible to use as investment instrument), money exchange platform but with added functionality (fact-checking, game dapps) and voting platforms[12].

Apart from numerous game applications and simple coin exchange, even CRAB based auction platforms are possible. At such a CRAB auction, users can operate with smart contract, which can ensure that the party bidding has enough funds to make such bid, and bids will not be disclosed to third parties[13]. At the same time, corporate governance based on CRAB platform with the secure voting process, digital meeting and transparent governance can be available for shareholders is in the nearest future[14]. Moreover, Ethereum is suitable not only for managing smart contracts for business activity, but also to create smart contracts for the Internet of Things them to cooperate with each other[15]. Therefore, the possibilities of CRAB are open to new business ideas and limited only with available technological means and human fantasy.

Not just private businesses, but also governments are becoming interested in smart contracts platforms. Recently the Australian government informed about the creation of the National Australian CRAB platform, which will allow all businesses in Australia to perform and to follow-up fully transparent contract activity at all stages, from negotiation to enforcement.[16] Such an idea is very innovative and can be an example for other countries to ensure transparent and effective business activity in the state. However, such a platform differs from previously mentioned private CRAB platforms in that the companies have to show their identity (to bind real identity to crypto key), the contracts are not anonymous, the assets are fiat money with the support of the respective national bank or crypto tokens issued by the national authorities – but the system is the same.

In the future, CRAB-based smart contract can be used to certify property rights or shares in company capital[17] with no need for a notary or any governmental registration offices. For example, in Switzerland in the Vaud canton, a couple was married using a smart contract on a CRAB platform – such a contract has to be renewed every 42 months.[18]Also in Switzerland in the city of Zug, a CRAB-based voting system was tested recently.[19] Therefore, nowadays there is an urgent need in legal qualification of such CRAB-based smart contracts in order to make such marriages, certification of property rights or voting systems official, which can lead to securing processes from human mistakes, vague definitions,

[10] Official description of CryptoKitties dapp, available at: https://www.cryptokitties.co/, (last visited 4 October 2018).

[11] Official description of 0xUniverse dapp, available at: https://0xuniverse.com, (last visited 4 October 2018).

[12] Ethereum White Paper, p. 8.

[13] Catalini, C. and Gans, J.S., *Some Simple Economics of the Blockchain*, Rotman School of Management Working Paper No. 2874598, 2017, p.32, available at: https://ssrn.com/abstract=2874598, (last visited 10 October 2018).

[14] Leonhard, R., *Corporate Governance on Ethereum's Blockchain*, 2017, p. 20, available at: https://ssrn.com/abstract=2977522, (last visited 10 October 2018).

[15] Harm, J., Obregon, J. and Stubbendick J., *Ethereum vs. Bitcoin*, Creighton University, p.8, available at: https://www.economist.com/sites/default/files/creighton_university_kraken_case_study.pdf, (last visited 10 October 2018).

[16] Press Release, *New blockchain-based smart legal contracts for Australian businesses*, The Commonwealth Scientific and Industrial Research Organization, 2018, available at: https://www.csiro.au/en/News/News-releases/2018/New-blockchain-based-smart-legal-contracts, (last visited 4 October 2018).

[17] Werbach K. and Cornell N., *Contract Ex Machina*, Duke Law Journal, Vol.67, 2017, p.335, available at: https://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=3913&context=dlj, (last visited 4 October 2018).

[18] News report, *Switzerland's first blockchain marriage*, Le News, 2018, available at: https://lenews.ch/2018/08/03/switzerlands-first-blockchain-marriage/, (last visited 4 October 2018).

[19] News report, *Swiss town tests blockchain-based voting*, Le News, 2018, available at: https://lenews.ch/2018/06/26/swiss-town-tests-blockchain-based-voting/, (last visited 4 October 2018).

differences in language interpretations[20] and can be useful for helping countries to ensure transparency[21] and to reduce bureaucracy time to a minimum.

Nowadays CRAB based smart contracts on movable property transfer are possible, but they only possess *sui generis* character, representing evidence, but not a legal title on such property[22], this issue can be solved in the future with the implementation of governmental CRAB platforms for registration of property rights, both for movable and immovable property[23]. For example, Sweden is in the process of testing a new governmental system for CRAB-based property register[24]. For now, still, CRAB based purchase is possible: for example, in the the EU first Blockchain based smart contract on immovable property purchase using Ether was conducted[25] with via the Propy application.[26]

With government-based CRAB platforms, there is a possibility to convert laws into codes to reach specific policy goals. For example, in the US the OpenLaw platform started to function as a trial to ensure tax compliance[27], moreover, it is possible to use CRAB to manage payrolls both on a company and governmental level (with the creation of a governmental CRAB platform).[28]

Considering the legal aspect of smart contracts usage and their legal validity, there are positive development in case-law and legislation worldwide, however, the process of implementation of CRAB technology-based smart contracts in existing legal frameworks is in a very early stage. Nowadays courts started to accept CRAB based data as legal evidence in court proceedings, which has a great influence on legal validity and enforceability of CRAB based smart contracts. For example, in China, the Supreme People's Court stated that CRAB stored data is accepted as legally valid evidence if such data is signed with the valid digital signature and includes reliable timestamps[29]. The UK government is developing a new strategy to use CRAB to store and analyze digital evidence in court proceedings in the UK.[30] In Vermont in the US, CRAB records are as well permissible in a court proceeding if they meet certain requirements.[31]

Not only courts but also legal firms and arbitrational institutions are trying to test all possibilities of CRAB technology. Some private CRAB platforms are created to make business life, commercial transactions and dispute resolution more effective. For example, Jur Alliance created a special tool for

[20] Raskin, M., *The Law and Legality of Smart Contracts*, Georgetown Law Technology Review 304/2017, 22.09.2016, p. 325, available at: https://ssrn.com/abstract=2959166, (last visited 4 October 2018).

[21] Hileman, G. and Rauchs, M., *2017 Global Blockchain Benchmarking Study*, 2017, p.89, available at: https://ssrn.com/abstract=3040224, (last visited 10 October 2018).

[22] Jaccard, G., *Smart Contracts and the Role of Law*, 2018, p.18, available at: https://ssrn.com/abstract=3099885, (last visited 9 October 2018).

[23] Jaccard, p.18.

[24] Rizzo, P., *Sweden Tests Blockchain Smart Contracts for Land Registry*, Coindesk, 2016, available at: http://www.coindesk.com/sweden-blockchain-smart-contracts-landregistry/, (last visited 11 October 2018).

[25] News Report, *EU completes first real estate sale using blockchain technology*, Verdict, 2018, available at: https://www.verdict.co.uk/blockchain-real-estate/, (last visited 10 October 2018).

[26] Official description of Propy project, available at: https://propy.com/, (last visited 10 October 2018).

[27] Official description of Open Law project, available at: https://openlaw.io/, (last visited 04 October 2018).

[28] Ainsworth, R.T. and Viitasaari, V., *Payroll Tax & the Blockchain*, Tax Notes International, Boston University School of Law, Law and Economics Research Paper No. 17-17, 2017, p.9, available at: https://ssrn.com/abstract=2970699, (last visited 10 October 2018).

[29] News Report, *Blockchain Records Will now be Accepted as Legal Evidence, China's Supreme Court Rules*, CCN, 2018, available at: https://www.ccn.com/blockchain-records-will-now-be-accepted-as-legal-evidence-chinas-supreme-court-rules/, (last visited 10 October 2018).

[30] Balaji A., *How we're investigating Digital Ledger Technologies to secure digital evidence*, Her Majesty's Courts and Tribunals Service, 2018, available at: https://insidehmcts.blog.gov.uk/2018/08/23/how-were-investigating-digital-ledger-technologies-to-secure-digital-evidence/, (last visited 10 October 2018).

[31] V.S.A, par § 1913, available at: https://legislature.vermont.gov/statutes/section/12/081/01913, (last visited 10 October 2018).

legal construction of smart contracts for arbitration procedures with the focus on effective dispute resolution and fair arbitration between parties.[32] The Accord project is developing a platform for legally enforceable smart contracts.[33] The LegalZoom is working on applications for the creation of CRAB based smart contracts for small and medium businesses.[34]

Considering the abovementioned, nowadays multiple forms of application of CRAB platforms and smart contracts s possible for governmental institutions (governmental service provision, auction, notary and registration service, voting, certification of rights) and private businesses (corporate governance, dispute resolution, B2B and B2C traceable smart contract) - in order to secure data storage, fasten transaction, ensure transparency, reduce transaction cost and to provided more personalized services for individuals, which is beneficial for all society.

3. Smart Contracts. Benefits and Legal Challenges

The "smart contract" term by itself appeared before CRAB technology, electronic signature and other means, without which we cannot imagine smart contracts nowadays. The first definition of the smart contract was offered by Nick Szabo in 1994.[35] According to Szabo, a smart contract is defined as a computerized transaction protocol that automatically executes the terms prescribed in a contract, satisfies contractual conditions, minimalizes accidental risks and leads to unnecessity in intermediaries[36]. Smart contracts are defined as agreements automatized by technical means of execution[37] and enforceability by legal means.[38] However, enforceability of smart contracts in a legal sense remains an open question, as the party of a smart contract (or third party with interests involved) should count not only on absence of any error in computer code to secure performance of the contract, but also on legal enforceability and traditional legal protection (from governmental bodies) in case of non-performance, failure in performance or nullity of a contract by itself[39].

Going backwards, one of the earliest examples of smart contracts can be a product purchase in the vending machine – where in exchange of money inserted, the machine executes the contract automatically and the buyer receives purchased products[40]. With the technological development, the smart contracts from vending machines were developed to CRAB contracts. In smart contracts, the same as in a vending machine, execution is done automatically, there is no possibility to breach the contract

[32] Official description of Jur Alliance project, available at: https://jur.io/, (last visited 4 October 2018).

[33] Official description of Accord project, available at: http://www.accordproject.org/, (last visited 4 October 2018).

[34] News Report, *LegalZoom Will Use Smart Contracts In Legal Documents*, PRNewsWire, 2018, available at: https://www.prnewswire.com/news-releases/legalzoom-to-offer-smart-legal-contracts-with-clause-300713717.html, (last visited 10 October 2018).

[35] Szabo, N., *The Idea of Smart Contracts*, 1994, p.306, available at: http://www.fon.hum.uva.nl/rob/Courses/InformationInSpeech/CDROM/Literature/LOTwinterschool2006/szabo.best.vwh.net/smart.contracts.html, (last visited 4 October 2018).

[36] Szabo, p. 306.

[37] Raskin, p. 306.

[38] Clack, C.D. et al., *Smart Contract Templates: Foundations, Design Landscape and Research Directions*, 04 August 2016, (unpublished manuscript), available at: http://arxiv.org/pdf/1608.00771v2.pdf, (last visited 4 October 2018); Raskin, M., *The Law and Legality of Smart Contracts*, p. 309.

[39] Mik, E., *Smart Contracts: Terminology, Technical Limitations and Real World Complexity*, 2017, p.13, available at: https://ssrn.com/abstract=3038406, (last visited 9 October 2018).

[40] Raskin, p. 306.

for a party[41]. At the same time, there is no possibility to undo an executed smart contract[42] and no dispute (possible only *post factum*[43]) can restore the rights to the same condition, as it was before such execution. According to a recent British Columbian Supreme Court decision, the court obliged (*post factum* after an error) a Singapore based CRAB platform to return 530 Ethers (worth around 391 000 US dollars) mistakenly sent to Initial Coin Offering investor[44]. Therefore, from one point, execution of a smart contract does not rely on parties willing or unwilling to execute it, any breach, if there is no error, is impossible. In case, the breach occurs, legal enforcement is complicated due to the absence of legal regulations, however, possible.

The contracts automatization makes a contract performance as a secure one, as performance does not rely on the non-performance of the party or intermediary, on unpredictable circumstances, it depends only on the special condition, with the appearance of which the performance is automatically executed with the computer code. For example, in crowdfunding contracts made on the basis of the Ethereum project, which is a CRAB platform for decentralized applications and smart contracts, the contributors make donation to specific project and if the certain goal or the certain date is reached, then the money or CRAB tokens automatically transferred to the recipient, if not, they are automatically returned to the contributors.[45]

At the same time, smart contracts can depend not only on certain input from a contractual party but also on input from an external trusted source[46], for example, on a certain market level of company shares, financial data, certain law acceptance by the government. Whereas in CRAB based smart contracts, the payment is depending only on special fact, therefore, non-performance of the party and, subsequently, court cases connected with payment delays or contract enforcement are reduced to a minimum[47]. Such conditional characteristic of a smart contract can lead to efficient application in insurance (where the payment will be made automatically in a case of event occurrence), banking services (with CRAB technology it is possible to abolish SWIFT[48], moreover, currently many centralized banks are working on the development of CRAB technology-based services[49]) or licensed content distribution[50] (music, books to secure intellectual property rights protection), for example.

One of the benefits of CRAB based smart contracts usage is the absence of intermediaries between parties, but currently there is no legislation providing specific legal protective instruments for disputes arising between parties of smart contracts. Actually, CRAB based smart contracts are designed to eliminate any contract breach or any dispute, but if the dispute does arise in the end, there are still no legal regulations to solve them. At the same time, all possible ways of dispute resolution (court proceeding, arbitration or mediation)are rendered unavailable due to the anonymous nature of smart

[41] Werbach and Cornell, p.332.

[42] Werbach K. and Cornell N., *Contract Ex Machina*, p.333; Grundmann, S. and Hacker, P., *Digital Technology as a Challenge to European Contract Law – From the Existing to the Future Architecture*, European Review of Contract Law, 2017, p.22, available at: https://ssrn.com/abstract=3003885, (last visited 9 October 2018).

[43] Raskin, p. 322.

[44] News Report, *Canada's Supreme Court of British Columbia Allows Copytrack Crypto Firm to "Reclaim" 530 ETH*, BitcoinExchangeGuide, 2018, available at: https://bitcoinexchangeguide.com/canadas-supreme-court-of-british-columbia-allows-copytrack-crypto-firm-to-reclaim-530-eth/, (last visited 10 October 2018).

[45] Official description of Ethereum platform.

[46] Peters, G. and Panayi, E., *Understanding Modern Banking Ledgers Through Blockchain Technologies: Future of Transaction Processing and Smart Contracts on the Internet of Money*, 2015, p. 7, available at: https://ssrn.com/abstract=2692487, (last visited 4 October 2018).

[47] Raskin, p. 324.

[48] Harm, Obregon and Stubbendick, p.9.

[49] Hileman Rauchs, p.78.

[50] Catalini and Gans, p.28.

contract based transactions[51] (on private CRAB platforms). However, on public CRAB (for example, the Australian CRAB which was discussed above) arbitration is the most suitable way to solve *post factum* any possible disputes arising from smart contracts. There are some CRAB arbitration platforms in development (as explained above), but if the contract was made anonymously, it will be hard to prove the identities of the parties in such CRAB arbitration, however, as was shown above, some countries already have adopted legislation to permit CRAB data as evidence.

Moreover, the conditional character of smart contracts and automatization of contract performance eliminate the possibility of court injunctions in such performance, as intermediate measures cannot change existing code. Therefore, one of the biggest problems of smart contracts usage is the absence of specific legal regulation for dispute resolution, notwithstanding of that, the CRAB-based smart contracts' transactions have a high level of automatization, which allows to eliminate conflicts between parties and to reduce such disputes to the minimum.

Considering current developments of CRAB technology, the usage of smart contracts is also limited to certain transactions (as not every contract can be expressed as a CRAB-based smart contract, for example, obligations, fulfilment of which relies on overall evaluation of performance under the contract)[52], but this is due only to present technical means, which can be changed in the future.

CRAB based smart contracts allow for lower transaction costs and faster transaction[53], eliminate ambiguity in contract terms as the value can be only true or false[54], provide high efficiency and security of transaction, eliminate risks connected with non-performance, eliminate disputes, remove intermediaries, eliminate human mistakes influencing contract efficiency and reduce long lasting bureaucracy need – but at the same time, the absence of proper legal regulation and technical means limits the applicability of CRAB-based smart contracts in practice.

Notwithstanding all mentioned benefits of smart contracts, some most important cons of CRAB contract usage are *inter alia* the possibility to hack the code (for example, DAO, Bitfinex, Parity hacks[55]), the interruption of data integrity, the absence of specific data protection[56] (IP address protection, or protection of company-specific data[57], for example) and legal unenforceability in certain jurisdictions.

Some countries have already started to amend legislation to ensure legal validity and legal enforcement of smart contracts. For example, in California a new amendment to the Government Code is being developed to create a working group to enable effective usage of CRAB technology to the benefit of California's businesses.[58] In Arizona law, the definition of smart contract, which describes smart

[51] Kaal, W.A. and Calcaterra, C., *Crypto Transaction Dispute Resolution*, Business Lawyer, 2018, p.38, available: https://ssrn.com/abstract=2992962, (last visited 9 October 2018).

[52] Mik, p.25.

[53] Davidson, S., De Filippi, P. and Potts, J., *Economics of Blockchain*, 2016, p.11, available at: https://ssrn.com/abstract=2744751, (last visited 10 October 2018); Hileman and Rauchs, p.88.

[54] Catchlove, P., *Smart Contracts: A New Era of Contract Use*, LLH473 - Independent Research Project, 2017, p.8, available at: https://ssrn.com/abstract=3090226, (last visited 11 October 2018).

[55] News report, *Cryptocurrency: How To Avoid Getting Hacked*, Forbes, 2018, available at: https://www.forbes.com/sites/forbesagencycouncil/2018/09/27/cryptocurrency-how-to-avoid-getting-hacked/#29a21bc44692, (last visited 4 October 2018).

[56] Ardit, D., *Ethereum Smart Contracts: Security Vulnerabilities and Security Tools*, Norwegian University of Science and Technology, 2017, p.17, available at: https://brage.bibsys.no/xmlui/bitstream/handle/11250/2479191/18400_FULLTEXT.pdf?sequence=1, (last visited 10 October 2018).

[57] Hileman and Rauchs, p.71.

[58] California Assembly Bill 2658 text, 29.08.2018, available at: https://legiscan.com/CA/text/AB2658/2017, (last visited 4 October 2018).

contract as an event-driving program, was adopted[59], moreover, this law prescribed that a smart contract cannot be denied legal effect only because it is not realized in traditional contract form.[60] The UK Law Commission also provides legal research on possible amendments in legislation to regulate CRAB smart contracts[61]. According to the legislation of France, CRAB technology (or Blockchain) is defined as shared electronic registration technology.[62] In Malta, there is a specific legal framework provided by the Virtual Financial Assets Act of 2018, which regulates the activity of Initial Coin Offerings, placement of virtual assets, virtual assets' exchange and CRAB-based smart contracts[63]. The creation of such a legal framework as in Malta is a highly innovative legal step along the way of ensuring legal validity and legal enforceability of CRAB-based smart contracts.

Not just a legal enforceability of valid smart contracts can be an open question, but also a performance of a not legally valid contract. For example, the question of legal capacity can arise during the transaction based on CRAB smart contracts, as smart contracts have no means to test the legal capacity of the parties, most of the transactions are anonymous (on private CRAB platforms) and operated with a usage of a personal crypto key[64]. Therefore, the weak point of legal validity, possible nullity and legal enforceability of CRAB-based smart contract can be legal incapacity of a party[65], however, invalidity of a contract with legally incapable person is possible to prove only post factum after the contract performance, as was written above, which again leaves the room to develop legal mechanism to restitution and dispute resolution regulations.

At the same time, a smart contract is not a contract signed with a certified digital signature, but a personal crypto key, thus, in most jurisdictions it is not considered as a contract in written form[66]. Therefore, such contracts represent th free will of the parties and can be binding only for these parties, but the legal validity of such CRAB-based smart contracts for third parties needs to be regulated by law.

Moreover, the subject of a smart contract can be based on a value or an act, which infringes a fundamental principle of legal order, therefore, such a contract will be invalid from the perspective of law[67], but it will be executed anyway, because the code is bound to a certain event, not legal norms.[68] In such a case, , , it is only possible after contract execution to claim *post factum* invalidity of the contract and restitution of right, which opens the door to illegal trading using CRAB-based smart contracts, and therefore there is an urgent need to regulate smart contracts worldwide.

Considering the absence of regulations on smart contracts, not only the enforceability of CRAB-based smart contracts, but also certain specific legal issues should raise the awareness of the international

[59] Blemus, S, *Law and Blockchain: A Legal Perspective on Current Regulatory Trends Worldwide*, Revue Trimestrielle de Droit Financier, 2017, p.13, available at: https://ssrn.com/abstract=3080639, (last visited 9 October 2018).

[60] Jaccard, p.20.

[61] UK Law Commission, Annual report 2017-18, no. 379, 2018, p.10, available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/727386/6.4475_LC_Annual_Report_Accounts_201718_WEB.PDF, (last visited 4 October 2018).

[62] Blemus, p.12.

[63] Virtual Financial Assets Bill, March 2018, Part I, available at:http://justiceservices.gov.mt/DownloadDocument.aspx?app=lp&itemid=29079&l=1, (last visited 4 December 2018).

[64] Werbach and Cornell, p.371.

[65] Jaccard, p.23.

[66] Jaccard, p.23.

[67] Principles, Definitions and Model Rules of European Private Law, Draft Common Frame of Reference (DCFR), 08.02.2007, II. – 7:301, available at: https://www.law.kuleuven.be/personal/mstorme/2009_02_DCFR_OutlineEdition.pdf, (last visited 09 October 2018).

[68] Savelyev, A., *Contract Law 2.0: «Smart» Contracts As the Beginning of the End of Classic Contract Law*, Higher School of Economics Research Paper No. WP BRP 71/LAW/2016, 2016, p.17, available at: https://ssrn.com/abstract=2885241, (last visited 9 October 2018).

community, for example, consumer protection issues in smart contracts from the perspective of a standard form contract. According to EU law, a 'standard term' is described as a term which was not individually negotiated by the parties, drafted in advance by a trader for several transactions involving different parties and the weaker party did not, therefore, had a chance to influence such term and its consequences, particularly in the context of a pre-formulated standard contract.[69] CRAB-based smart contracts are basically unilateral acts – one party places an offer on a CRAB platform and another party accepts this offer – or not[70] (for example, like in the fact-checking decentralized application DNN – one party is paid if such party provides services on fact checking – an offer is placed and any other party can accept it[71]). Such unilateral acts can raise a question of the unfairness of the terms, however, the mechanism to protect consumer rights and enforce such rights in smart contracts is still to be developed.

Therefore, there is an urgent need for the legal regulation of CRAB-based smart contracts, which in the future can lead to the appearance of new fields of law, such as Crypto Law, and lead to changes in existing legal structures and frameworks.[72]

4. Conclusions

Fast technological progress made a widespread CRAB based smart contract usage as a perspective for the nearest future. Create, Retrieve, Append, Burn technology opens the new possible way of application in various areas: from gaming application to corporate governance, tax management, Internet of Things, auctions, contractual relationships and certification of rights. Many governmental institutions, private businesses and Central Banks nowadays involve their employees in CRAB based projects, because they see all benefits of CRAB and possible development for technological and legal progress.

CRAB based smart contracts have a high level of transactions security, low transaction costs and low ambiguity. Such smart contracts are able to reduce the time spent on bureaucracy, fasten the process of performance, ensure transparency, eliminate breach of contract, human mistakes, non-performance, and the need for dispute resolution and an intermediary. CRAB based smart contract can be used to certify high performance and transparency of conditional contracts, such as insurance contract, crowdfunding, to certify property rights (movable, immovable and intellectual property).

Notwithstanding all benefits of CRAB based smart contracts, in most of the countries, there is no legal mechanism to secure legal enforceability and to ensure legal validity of CRAB smart contracts. However, all problems connected with the realization of CRAB-based smart contracts are connected either to technical developments (possibility of hacking, data protection, data integrity, errors in the code) or to the absence of legal regulations specific to CRAB-based smart contracts and the impossibility to fit it into existing legal frameworks.

[69]Council Directive 93/13/EEC on unfair terms in consumer contracts, Official Journal of the European Communities, L 95/29, 05 April 1993, Art. 3, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A31993L0013, (last visited 26 September 2018); Proposal for a Regulation of the European Parliament and of the Council on a Common European Sales Law, COM/2011/0635, 11 October 2011, Art. 2, available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A52011PC0635, (last visited 26 September 2018); DCFR, Art. I:109; 2016 UNIDROIT Principles on International Commercial Contracts, Art. 2.1.19, available at: https://www.unidroit.org/instruments/commercial-contracts/unidroit-principles-2016, (last visited 27 September 2018).

[70] Werbach and Cornell, p.343.

[71] Official description of DNN dapp.

[72] Reyes, C., *Conceptualizing Cryptolaw*, Nebraska Law Review, Vol. 96, 2017, p.62, available at: https://ssrn.com/abstract=2914103, (last visited 11 October 2018).

Therefore, all existing cons of CRAB based smart contracts can be eliminated with legislation amendments and technical development, which can lead to total restructuration of all existing legal frameworks, legal structures and the creation of a new field of law – Crypto law.

Increasing Efficiency in Public Administration Through a Better System of Administrative Justice

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This article seeks to examine the role of administrative justice in increasing the efficiency in public administration. The article intends to analyze the connection between the capacity of judicial review of administrative acts as a crucial instrument to improve the functioning and efficiency of the administration and to ensure good governance in general.

The article raises the question how the judicial review of administrative decisions affects the level of efficiency in public administration through increasing the legal security, prevention of arbitrariness and raising public confidence?

There is a causal relation between administrative justice and the level of efficiency of public administration, therefore the system of judicial review should be considered as the main mechanism to promote the main principles of good governance toward more efficient, transparent and accountable decision making process.

Keywords: Efficiency, administrative justice, judicial review, public administration, arbitrarily.

1. Introduction

One of the essential principles of public administration is reaching the efficiency at all levels of its activity, in order to fulfill the citizen's requirements. Public administration is traditionally oriented toward reaching the efficiency to achieve the objectives concerning the delivery of public services to citizens. Efficiency is considered as the relationship between determined objectives and results that are reached with minimum resources and efforts. In general sense, the efficiency can be achieved under the conditions of take advantage of the products of an administrative action in relation to the assets used.

The efficiency of administration has a direct connection with all stages of reform in public administration such as modernization of public services, computerization of public services and interaction between administration and courts in the reviewing process of administrative acts before a competent court. Public administration in general and governments specifically play curtail role in the administrative reform in order to increase the level of efficiency through offering better and more qualified services, reducing the time for public officers and citizens, reducing the level of corruption, increasing the awareness and trust of citizens on the work of administration, etc. Reform of public

administration is also focused on increasing the level of efficiency through decreasing shortages and taxes and enhancing financial status in order to reach economic developments. The reforms in public administration have changed the relationship between the state and citizen, since the citizen is considered as an active party in an administrative procedure. This proactive position of the citizen in an administrative process promotes a simplification of procedure, higher level of transparency and accountability in public administration.

The principles of good administration determines the relationship between the administration and citizens, where is required an equilibrium between the public and citizens interest. The implementation of such principles seeks a proper administrative system that sets the rules for legal, efficient and timely decision-making process through protection of citizens' rights, as well as the structured administration and the effective administrative justice.

In case an administrative body fails to respect the above rules an individual has the right to judicial review in order to influence the increasing of efficiency in the public administration. In many countries courts are provided with authority to fully examine the legality of the administrative acts, therefore the judicial review over the administration promotes increasing of efficiency in public administration through its influence in the quality of administrative acts. In addition, the process of review of administrative acts by the court obliges the pubic officials to issue legal decisions in order to improve the level of legitimacy.

Therefore, there is a causal relation between administrative justice and the level of efficiency of public administration. In order to understand the appropriate role for the courts it is necessary to describe what courts can and cannot do, having in mind that the court's authority is to guarantee that the administrative body exercised its functions legally and fairly? In the process of interaction between courts and administrative bodies are frequently evident dissatisfaction and a dose of skepticism considering that public officials are not always satisfied with courts interference in one hand, while judges are not happy with performance and responsiveness of administrative body in another hand.

Therefore, hard work should be made to constitute a better relationship between these branches in order to strengthen the system of decision making, relations, coordination and cooperation and to create appropriate procedures for dispute resolution.

Furth more, judicial review of administrative actions is considered a basic principle toward a modern and democratic administration that has direct impact in increasing the level of accountability, transparency and efficiency in the process of decision-making.

Here is a famous quote from Woodrow Wilson's essay, "The Study of Administration," published in 1887:

> *"It is the object of administrative study to discover, first, what government can properly and successfully do, and, secondly, how it can do these proper things with the utmost possible efficiency and at the least possible cost either of money or of energy".*

2. The Impact of Administrative Justice in Increasing Efficiency Towards Good Administration

Efficiency in administration is considered as main topic of study in administrative sciences bearing in mind that public administration is historically designed to attain the efficiency in order to reach its objectives and goals. Efficiency as concept was formerly adopted at early twentieth century. Efficiency refers to doing things in a right manner, respectively it could be defined as the output to input ratio in order getting the utmost output with minimum assets.

This model is derived in Woodrow Wilson's (1887) famous study on public administration that called for the study of the field along professional lines. In 1957, Farrell already investigated the question how to measure efficiency and highlighted its relevance for economic policy makers. "It is important to know how far a given industry can be expected to increase its output by simply increasing its efficiency, without absorbing further resources".[1]

Schechter states that "during the municipal research era, emphasis on efficiency was seen as a means to provide a relationship between citizens and policy, because it could translate provision as related to performance of public goods and services".[2] George Frederickson has stated "equitable, efficient, and economical" as "three pillars" of public administration. He viewed "equitable" as composed of qualities such as "fairness, justice, and equality," whereas "efficient" is to do the best or the most preferred, and "economical" is to achieve it by least spending.[3] Rutgers and van der Meer trace the origins of efficiency back to Aristotle's work on the nature of knowledge, specifically "four aspects of causation" from which his followers derive the notion of efficiency.[4]

Administrative efficiency is the thoughtful operation of government, proper performance and management in order to smooth the progress of administrative effectiveness and simplify the process of decision-making.

Reform of (general) administrative procedures and administrative justice has been a common issue in the Western Balkan for a while, within the good governance and good government context that required following the principles of European Administrative Space, EU and Council of Europe guidelines.[5]

The process of globalization over the past decades seeks a new role of administrative bodies in terms of their functions, role and efficiency, having in mind that governments have been criticized for their negligence to respond to citizens expectations. This process enables new cost-effective developments as well as promotes new technological, social and institutional challenges that governments must deal with in order to encourage social developments. In this process governments must play crucial role in order to enable more effective and efficient services to be delivered to citizens.

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[1] M. J. Farrell, *The Measurement of Productive Efficiency*, Journal of the Royal Statistical Society, Series A, General, Part 3, Vol. 120, No. 3, 1957, pp. 253-281.

[2] H. L. Schachter, *Frederick Taylor and the public administration community: A reevaluation. Albany: State University of New York Press*, 1989.

[3] H. George Frederickson, *Social equity and public administration: origins, developments, and applications*, 2010. Retrieved from: http://books.google.com/books?id=d0Q7sfY8IHgC&;lpg=PR15&ots=GmDoalQErj&dq=equity%20in%20efficiency%20public%20administration&pg=PR4#v=onepage&q=equity%20in%20efficiency%20public%20administration&f=false

[4] Mark R. Rutgers, Hendriekje van der Meer, *The origins and restriction of efficiency in public administration*: Regaining efficiency as the core value of public administration. Administration & Society, 2010, 42, 755-779.

[5] ReSPA, *Efficiency and Simplifications of Administrative Procedures and Justice In The Western Balkan*, Discussion Paper and Provisional Programme, Zagreb, 29 – 30 January, 2014, p. 3.

The system of administrative justice is considered as the main engine to promote the higher level of efficiency in the process of decision making in public administration. Moreover, judicial review appears to be an indispensable instrument to enhance the quality of administrative action and ensure good governance. It is also fundamental for international economic exchanges, since security of trade and investment depends on public decision-making bodies being subject to effective means of oversight and redress.[6]

The ability of the courts to exercise the effective external control over the administration has had a major impact on increasing public administration efficiency in many countries around the world. Therefore, there is a direct relation between the administrative justice and level of efficiency in public administration, hence the system of judicial review should take into consideration the level of independence, strengthening the administration of justice, improving the level of transparency and responsibility, improving the efficiency and effectiveness and simplifying the procedures. New technologies should be adopted in order to provide efficient and consistent services to citizens.

In the article "Public Administration and the Courts, a clash of values," Diana Woodhouse suggested that the radical reform of the civil service has coincided with a period of judicial activism. She argued that "while the principles upheld by the courts have much in common with the traditional model of public administration, they may not accord with those associated with the drive for efficiency, measured in terms of value for money". In addition Woodhouse concluded that now, more than ever, both administrators and judges would benefit from a Code of Administrative Practice.[7]

The administrative justice system ought to be committed to improving the level of performance in order to enable rapid, reasonable, and unprejudiced hearings for each subject. The achievement of these objectives requires proficient level of management.

The challenge for the administrative law is to structure the administrative state to permit the agency discretion to deliver on its promise of superior expertise and accountability vis-a vis the courts, while constraining the agency from responding to any perverse incentives it may have to deviate from the promise. The key to this strategy, oxymoronically, is judicial review of the substance of the agency decision making, not the procedure that agency used to reach the substantive decision.[8]

The capacity of citizens to submit administrative activities to judicial review is seen as a foundation of the rule of law but also as an instrument to improve the functioning of the administration and to ensure good governance. Nevertheless, the scope and intensity of judicial review of actions by the administration differs among the legal systems, ranging from a formal legality control to the review of the substantive content of the administrative act. As a result, the court could take either a "judicial review" function or an "enforcement" function, replacing the decision of the administrative authority with its own evaluation.[9] The judicial review effects the process of the rule of law, in order to guarantee that administrative acts will be issued in harmony with a fair procedure and within the powers given by law. In this regard, administrative justice is required to ensure that public authorities do not act in arbitrary way in excess of their powers provided by laws. Judicial authority in the process of reviewing of administrative act is vested with authority to adjust and influence the level of democracy, legality,

[6] Jean-Marie Woehrling, *Judicial Control of Administrative Authorities in Europe*, Hrvatska Javna Uprava, god. 6, 2006, br. 3. str. 35–56.

[7] Diana Woodhouse, *Public administration and the courts: A clash of values*, Volume 15, 1995 - Issue 1, Pages 53-59.

[8] Mark Seidenfeld, *The Long Arm of Judicial Review*, 32 *J. LAND USE & ENVTL. L.* (2017). 579.

[9] Andrew Vaz, *Judicial Decisions and the Impact on Public Administration*, American Society for Public Administration, February, 2015.

responsiveness and efficiency of the administrative agencies in order to enable the implementation of principles of good administration.

The judicial review of administrative acts in many developing countries generally depends on the level of national commitment to the rule of law and the independence of the judiciary. In countries where regimes can easily change laws (by the executive or through compliant legislative bodies), the situation becomes rather tenuous. The laws may negate the jurisdiction of courts or change substantive laws. In these instances there is a state of law, but no rule of law.[10]

Most systems in the world permit the court review of administrative acts, though with some restrictions. In European law systems (French model) the public administration decisions are subject of review by special courts called administrative courts, while in the Anglo-Saxon system such decisions are subject of regular courts. However, the role of the courts in judicial review process also changes among different countries. In some cases the judicial review is limited to the legality administrative dispute, while in some countries the courts are authorized in the dispute of full jurisdiction by the competent court.

In the 21st century, governments can manage to increase the level of efficiency and sustainability through direct implementation of court decisions issued in the process of judicial review. The main objectives to improve the efficiency are focused on enhancing access to justice, improving the efficiency of the courts and increasing the level of integrity and accountability in the justice system.

The EU Justice Agenda for Europe 2020 – Strengthening Trust, Mobility and Growth within the Union highlights the contribution of EU justice policy to supporting economic recovery, growth and structural reforms. "The EU has taken action to progressively build the trust necessary for businesses and consumers to enjoy a single market that truly works like a domestic market. Red tape and costs have been cut: a judgment given in one Member State can now be recognized and enforced in another Member State without intermediary procedures (the formality of 'exequatur' has been progressively removed in both civil and commercial proceedings)".[11]

In order to conduct more effective judicial review of administrative acts, governments should build a culture of efficiency and introduce more transparent, professional and accountable system by integrating performance measures and evaluations at all levels of governmental departments. Accordingly, a system of available and clearly demarcated legal remedies ensures more effective case-management and, as a result, potentially decreases the case backlog of administrative disputes in the respective court. All these activities should be undertaken in harmony with principles of good administration outlined in the European Code of Good Administrative Behavior.

3. Legal Certainty and Prevention of Interference in Administrative Decision Making Process

It often happens that administrative bodies bring decisions which may be in contradiction with the interest of natural and legal persons. In such circumstances, the expectation of individuals for a final fair process is challenged by concerns over the failure of a proper application of the principle of legal

[10] ST/TCD/SER.E/27, *Rethinking Public Administration: An Overview*, Division for Public Economics and Public Administration Department of Economic and Social Affairs, p. 163. Retrieved from: http://unpan1.un.org/intradoc/groups/public/documents/un/unpan000455~1.pdf

[11] Theme 6: *Strengthening the quality of judicial systems*, Quality of Public Administration – A Toolbox for Practitioners, p. 341.

certainty and potential interference in administrative decision-making process. However, there is a procedure in administrative justice that allows parties to challenge alleged administrative violations before competent tribunals either through compensation claims or requests to bring the justice in place. This is recognized as "substantive decision making and thus enhances judicial power".[12] This power invested in the judicial branch balances the inequality of power between public administrative bodies and individuals through legal remedies, supporting the principal that "the right to challenge administrative acts is an inherent right of the citizen based on the principle of equality of treatment".[13] So, we may say that administrative justice is a safeguard that controls illegal actions of administrative bodies and simultaneously prevents interference in the administrative decision making process. The parallel control and correction of illegal actions of administrative bodies bring the parties into a better position when it comes to the adequate use of legal remedies and equal treatment. Therefore, the guarantee of the principle of legal certainty contributes towards strengthening the rule of law from both perspectives, applicable to either national or international law.

In a democratic country which respects rule of law principles, the role of judicial power is to affirm legal certainty as a general principle, since, "the principle of legal certainty provides an important assertion of the rule of law that those subject to the law must know what the law is so as to plan their action accordingly".[14] This principle also requires that legal systems should have clear and concise legal provisions which are acceptable for citizens. Thus, each individual should be able to understand the consequences of interference of administration and its impact in his or her rights.

Judicial review over administrative actions is one of the basic requirements of both the rule of law and democracy, so we may underline that "the power to review administrative acts by the Court is the basis of any democratic society".[15] Subsequently, the institute of judicial review of administrative actions remains a resilient mean of citizens' disposal whose rights are denied in an administrative process.

A well-functioning system of judicial review over administrative actions also aims to normalize bureaucratic discretion where people are affected. On one hand, effective judicial review of administrative acts serves as a crucial foundation for human rights protection, while on the other hand, it is an essential instrument which improves the quality of administrative actions and ensures good governance. Therefore, we may say that the "key aim of administrative justice is to control and bring justice for individuals affected by interferences of administration".[16] So, a good system of administrative law which represents a modern public administration must always be derived from a solid control mechanism.

Through the control of administrative instruments and its structure, justice can be made more attainable to individuals who are the subject of rights violations due to the improper exercise of administrative power, specifically because public administration bodies often issue administrative acts tackling different areas, wherein the rights and freedoms of individuals are broadly jeopardized. In this regard, it is of crucial to have effective control over the work of public administration, considering that

[12] Tom Ginsburg, *Judicial Review in New Democracies - Constitutional Courts in Asian Cases,* Cambridge University Press, 2003, p. 227.

[13] Natasha Buontempo, *Judicial Review of Administrative Acts in the European Union and in France: A Comparison*. Malta*Id-Dritt* Vol. XXII (2010). Available at: http://works.bepress.com/natashabuontempo/1/.

[14] Alexander H. Türk, *Judicial Review in EU Law*, School of Law, King's College London, UK, 2009, p. 129-130.

[15] Natasha Buontempo, *Judicial Review of Administrative Acts in the European Union and in France: A Comparison*. Malta*Id-Dritt* Vol. XXII (2010). Available at: http://works.bepress.com/natashabuontempo/1/.

[16] M.P. JAIN, *Judicial Review of Administrative Action*, Malacca Law Seminar, March 9-10, 1985, p. 3.

administrative activity is an extensive area and administrative legal relations in certain cases are established on the basis of the subordination of parties.

Legal certainty is thoroughly linked with the right to a fair trial which is guaranteed through most international standards and human rights treaties. The right to legal certainty is a basic standard for a democratic society run by rule of law principles, as "the right to a fair trial concerning the administrative justice relates not only to the development of the judicial process, but also to the right to initiate a judicial process".[17] Apart from its impact on legal certainty, the right to a fair trial "also increases the participation of individuals so that their demands are heard and reviewed by another independent and impartial power such as the court established by law and as sanctioned in Article 6 (1) of the ECHR.[18]

Rule of law principles and the right to an effective legal remedy against violations of individual rights should be guaranteed through constitutional provisions. Thus, the principle of legality and citizens' right to receive the reasoning of administrative decisions remain key requirements for a country which is governed by rule of law principles. In this context, "the most basic rules of administrative law are first that decision-makers may exercise only those powers which are conferred on them by law and, second, that they may exercise those powers only after compliance with such procedural prerequisites as exist. So long as administrators comply with these two rules, their decisions are safe".[19] Consequently, "The guarantee of the right to legal protection comes to application particularly when citizens experience serious consequences by administrative acts and administrative measures are unaltered. So, the right to legal protection is much less limited".[20] This guarantee in one hand means legal certainty, while on the other hand a kind of prevention of interference throughout administrative decision-making process.

The legal certainty and prevention of interference throughout the administrative decision-making process "requires that government authorisations to issue administrative acts which produce serious consequences, should be sufficiently determined and limited in their content and subject matter in order to allow citizens to easier identify potential violations affected by such acts".[21] This also is guaranteed by the following general legal principles: principle of legality, principle of division of powers, as well as the rule of law requirement for an enhanced protection against violation of individual rights from the interference of the government.

The principle of legality in public administration develops from the need for legal certainty and prevention of administrative interference. This principle requires each executive body to ensure that administrative acts are sufficiently determined and limited to the legal basis, regardless of the eventual consequences caused by such acts. Administrative legislation should be based on tangible legal provisions which regulate actions of administrative bodies and should not be limited only to general principles. If public administrations issue administrative acts on the ground of 'an incomprehensible general clause', which is more related to general principles rather than concrete provisions, this may lead to cases when acts of the administration are in contradiction with individual rights. Thus, human rights violations become evident. That is why we have the institute of judicial review of administrative acts as a preventive tool and effective remedy for protecting citizens' rights and interests, as "judicial

[17] Mirlinda Batalli, Islam Pepaj, *The Impact of the European Convention on Human Rights in the Field of Administrative Justice*", Acta Universitatis Danubius, Vol. 13, no. 3/2017, p. 87. Available at: http://journals.univ-danubius.ro/index.php/juridica/article/view/4478/0.

[18] Ibid, p. 88.

[19] Dr. Nguyen Van Quang, *Grounds for Judicial Review of Administrative Action: An Analysis of Vietnamese Administrative Law*, CALE Discussion Paper, No.3, January, 2010, p.11. Available at: http://cale.law.nagoya-u.ac.jp/_userdata/DP%20No.%203.pdf.

[20] Decision (Beschluss) of First Senate, 1 BvR 23, 155/73 – Third part (German Federal Constitutional Court, July 18, 1973).

[21] Decision of Bay v BVerfGE , VfGH n.F. 1, 81 [91] (German Federal Constitutional Court, July 4, 1956).

review of administrative acts must be effective so that citizens' rights and interests are afforded genuine protection and to ensure the credibility vis-à-vis society and the efficiency of the administration itself".[22]

Apart from the previous situations, individuals are enabled with legal certainty also through norming the institute of administrative silence. Thus, individuals might easily lose their trust in administrative making process if a reasonable deadline is not timely limited for the administration to issue an administrative act upon individuals' requests. In order to avoid such situations, all democratic countries set up deadlines which are mandatory for administration to response parties' requests within a reasonable time. The reasonable time is the norm, or standard length of time, required to resolve certain administrative cases… The use of deadlines that require agency action to commence or complete by a specific date is extremely common in the modern administrative state. If a time limit is set, failure to comply with that may well represent a failure to comply with the procedural rules relating to the adoption of an act adversely affecting an individual, thus constituting an infringement of essential procedural requirements.[23]

Regarding this issue, the Council of Europe in its recommendation on the judicial review of administrative acts *inter alia* provides: "Under no circumstances may a citizen's interests be harmed by the administration's remaining silent. After a certain time prescribed by law, this silence should open access to a tribunal. In such cases the administrative authority will be required to explain to the tribunal, at the applicant's request or at the request of the tribunal, its reasons for refusing the applicant's request. If the authority fails to give grounds, the tribunal shall hold its act to be unlawful".[24] Therefore, "the tribunal must be empowered to instigate proceedings to verify the lawfulness of administrative acts, including administrative silence or failure to act, and to draw the requisite conclusions from its findings".[25] The use of deadlines that require agency action to commence or complete by a specific date is extremely common in the modern administrative state. If a time limit is set, failure to comply with that may well represent a failure to comply with the procedural rules relating to the adoption of an act adversely affecting an individual, thus constituting an infringement of essential procedural requirements.[26]

Therefore, the rule of law principle remains one of the main pillars in a democratic society which *inter alia* aims in respecting the principle of legal certainty with a particular focus on the administrative decisions making-process. If the administrative making process is inconsistent with rule of law principles, chances for an extensive violation of human rights are bigger and the principle of legal certainty incurs flaw, as "one of the main features of legal order is the principle of legal certainty",[27] which *inter alia* is guaranteed through the judicial protection of rights. Additionally, a well-functioning public administration ensured through the judicial protection of rights promotes the "function of the legality of the public administration activity, and at the same time it remains a constitutional guarantee for citizens for the protection of their rights through a fair and public trial established by an independent and impartial tribunal".[28] Therefore, this form of protection of rights ensures citizens that legal certainty

[22] Recommendation Rec(2004)20, adopted by the Committee of Ministers of the Council of Europe on 15 December 2004 and explanatory memorandum, *The judicial review of administrative acts*, Paragraph, 86.

[23] Mirlinda Batalli, *Consequences of administrative silence in public administration*, SEER – Journal for Labour and Social Affairs in Eastern Europe. No. 1/2017, Volume 20, p. 144.

[24] Recommendation Rec (2004) 20 adopted by the Committee of Ministers of the Council of Europe on 15 December 2004 and explanatory memorandum, *The judicial review of administrative acts*, Paragraph, 16.

[25] Ibid, Paragraph, 21.

[26] Mirlinda Batalli, *Consequences of administrative silence in public administration*, SEER – Journal for Labour and Social Affairs in Eastern Europe. No. 1/2017, Volume 20, p. 144.

[27] Marek Antoni Nowicki, *European Convention (A short commentary to the ECHR).* Tirana, 2003, p. 187.

[28] Sokol Sadushi, *Procedural Administrative Law,* Tirana, 2017, p. 424.

exists and that public administrative body and their decisions undergo strict legal scrutiny through the application of general procedural rules which are a prerequisite for effective legal oversight.

4. The Impact of Administrative Justice in Improving Public Trust

A well-functioning administrative justice system initially improves both the reality and perception of legal certainty, prevents undue or illegal interference in the administrative decision making process, and improves the general quality of the decision making process. This also improves the citizens trust in rule of law principles wherein "each individual has the right to file a case before a competent court, in addition to this, citizens also have right to seek from the court why administration in some certain cases decline to deliver justice (so called administrative silence).[29]

Article 6 of the ECHR provides almost the same, since the violation of the right to access to the court and the subsequent denial of justice puts at risk democracies and institutions built on the rule of law principles. Regarding this, a democratic country through the institute of administrative disputes should guarantee that the decision making process is being achieved through a fair process which is free from interference and based on objective criteria wherein parties are free to have their say, because "impartiality is considered as one of the core principles which guarantees law order and allows citizens to trust in the courts, as a core value of democracy".[30]

The successful maintenance of the rule of law within a democratic country both requires and builds citizens' trust in government. This principle is also provided by the preamble of the ECHR, wherein parties are firmly committed to build their democracies based on a rule of law principles, which also relates to administrative justice, as "the power to review administrative acts by the Court is the basis of any democratic society".[31] A well-functioning of an administrative law system guarantees a solid judicial protection to its citizens and ensures "...that an administrative decision would be safe if the administrator exercises such powers as have been legally conferred on him (substantive requirement) and complies with procedures required by law (procedural requirement); therefore, grounds for review could be categorized based on these most basic requirements".[32]

Rule of law principles *inter alia* aim to guarantee a mechanism for effective judicial protection providing adequate legal remedies to individuals who want to challenge administrative decisions. Thus, such remedies establish core foundations of the justice which in turn guarantee equal treatment and respect for the dignity of individuals. The ECtHR in its case-law has considerably tackled this issue through obliging all countries to establish a legal system wherein courts try all cases within a reasonable time, because "a justice system fails due to lack timely trials which also impacts public trust in courts".[33]

The ECHR and ECtHR serve as guidelines to increase citizens' trust in public institutions in delivering administrative justice, as "the Convention is intended to guarantee not rights that are theoretical or illusory but rights that are practical and effective. This is particularly so of the right of access to the courts in view of the prominent place held in a democratic society by the right to a fair trial".[34] In

[29] Marek Antoni Nowicki, *European Convention (A short commentary to the ECHR").* Tirana, 2003, p. 161.

[30] Ibid, p. 182-183.

[31] Tom Ginsburg, *Judicial Review in New Democracies - Constitutional Courts in Asian Cases*, Cambridge University Press, 2003, p. 227.

[32] Dr. Nguyen Van Quang, *Grounds for Judicial Review of Administrative Action: An analysis of Vietnamese administrative law*, CALE Discussion Paper, No.3 January, 2010, Nagoya University Center for Asian Legal Exchange, p.21.

[33] Arta Vropsi, *Due process of the law in case-law of Constitutional Court of Albania.* Tirana, 2011, p. 219.

[34] Richard Gordon QC & Tim Ward, *Judicial Review and the Human Right Act*, London, 2000, p. 178.

particular, the court should consider the composition of trial panels, so to avoid situations when judges sitting at the trial panels do not satisfy requirements laid down by the principle of impartiality. In country run by the rule of law, this demand should not be limited only to the parties involved, but should be extended also to ordinary citizens in order to improve the trust in courts.[35] The ECHR supports the opinion that the proper use of the right to a fair trial by an independence and impartial tribunal established by law *inter alia* improves citizens trust in courts; the perceived impartiality of the courts being bolstered by the maxim "justice must not only be done, it must be seen to be done".[36]

Judicial review consists of the establishment of an independent body which, free from the executive power and administration, is able to review and adjudicate disputes caused by activity of administrative bodies.[37] So, the right to a fair trial and public trust will not exist without an effective judicial review of public administration acts, because "were Article 6(1) of ECHR to be understood as concerning exclusively the conduct of an action which had already been initiated before a court, a Contracting State could, without acting in breach of that text, do away with its courts, or take away their jurisdiction to determine certain classes of civil actions and entrust it to organs dependent upon the Government. The fair, public and expeditious character of judicial proceedings are of no value at all if there are no judicial proceedings"[38], meaning that this form of review, initially protects and guarantees the principle of legality, which, by extension, improves the citizens trust and avoids the interference in administration.

The citizen's right to appeal both administrative and judicial decisions is of crucial importance, particularly if such decisions affect individual rights of parties. Whether the appeal should first be directed to an authority at a higher level or to a court is an open question, but as stated in article 10 of the Universal Declaration of Human Rights, everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations. Article 6 of the ECHR similarly states that in the determination of his civil rights and obligations or of any criminal charge against him, everyone is entitled to a fair and public hearing within a reasonable time by an independent and impartial tribunal established by law. This implies that a person must always have the right to have his case heard in a court, even when it concerns administrative matters. This procedure, in turn, should be guided by common and universally accepted rule of law principles".[39]

The importance of the quality of justice and citizens' trust in administrative matters might only be seen if the principle of legality is being applied during entire administrative decision-making process, otherwise "the legality of an administrative decision can be judicially challenged on the basis of any of the four grounds for review including inexistence, incompetence, violation de la loi, and vice de forme".[40]

Judicial protection does not weaken administrative control, but contrary to this, helps it through an increased ability to reset illegal actions caused by administrative acts into legal ones".[41] This form of protection is only achieved through an effective, quality and independent administrative justice as a

[35] Arta Vropsi, *Due process of the law in case-law of Constitutional Court of Albania.* Tirana, 2011, p. 145.

[36] This adage is usually traced to Lord Chief Justice Hewart in the McCarthy decision of 1924. Quoted according: Jean Masso, *The powers and duties of the French administrative judge*, Available at: https://law.yale.edu/system/files/area/conference/compadmin/compadmin16_massot_powers.pdf.

[37] Esat Stavileci, Agur Sokoli, Mirlinda Batalli, *Administrative Law, Control of the work of administration and political accountability, Computerisation of Administration,* Prishtina, 2010, p. 139.

[38] Richard Gordon QC & Tim Ward, *Judicial Review and the Human Right Act*, London, 2000, p. 178.

[39] Per Bergling, Lars Bejstam, Jenny Ederlöv, Erik Wennerström, Richard Zajac Sannerholm, *Rule of Law in Public Administration: Problems and Ways Ahead in Peace Building and Development", Folke Bernadotte Academy, 2008*, p. 32.

[40] Dr. Nguyen Van Quang, *Grounds for Judicial Review of Administrative Action: An analysis of Vietnamese administrative law*, CALE Discussion Paper, No.3, January 2010, Nagoya University Center for Asian Legal Exchange, p. 21.

[41] Sokol Sadushi, *Procedural Administrative Law,* Tirana, 2017, p. 424.

basic right and a key component for an operational justice, because "the right to challenge administrative acts is an inherent right of the citizen based on the principle of equality of treatment".[42]

Therefore, through administrative justice, administrative bodies or the administrative actions are rendered under control of the courts. "One effective strategy of courts is to diffuse political power in the face of threats to concentrate it. This counter-majoritarian serves not only to protect the democratic process, as is conventionally argued. Diffusing political power also serves to widen the court's latitude for substantive decision making and thus enhances judicial power".[43] In relation to this, there are two tests to evaluate if the courts are independent. The first test defines the personal conviction of the judge in a given case; the second test defines if the judge has offered enough guarantees to exclude all reasonable legal doubts. The exclusion of these doubts helps build trust between the public that the courts. [44]

5. Conclusions

In today's reality, the administrative justice system is rightly considered as the main engine in promoting the highest level of efficiency in the decision-making process of any public administration. The ability of the judiciary to exercise effective external control over public administration has on the one hand significantly influenced the efficiency of public administration and, on the other hand, has triggered a constant legal interest in administrative justice, because the latter is rightly perceived as a limitation over administrative bodies and something that is provided by the judicial branch of power.

The right of citizens to challenge administrative decision-making through judicial oversight is seen as a foundation of the rule of law, but also as an instrument to improve the efficiency of administrative bodies and to ensure good governance. The principle of the rule of law for proper legal protection against violations of the rights by public governance is guaranteed via positive provisions of constitutional law, which *inter alia* provide that justice requirements, the principle of legality, and fair trial rights should be constitutionally based. Therefore, all constitutions of democratic countries guarantee that the right of individuals to react to administrative decisions through effective judicial oversight.

A properly accountable administrative justice systems increases legal certainty, which is itself closely linked with the right to a fair public trial, held within a reasonable time and by an impartial and independent tribunal. Legal certainty and the prevention of arbitrariness during administrative decision-making requires that any authorizations given through administrative bodies that have serious consequences, are to be sufficiently limited in terms of their content, object, purpose and measures, so that the violations are computable and objectively predictable for the citizen. Judicial protection does not weaken the administrative control but rather helps uphold the law violated in cases where administrative control itself has failed to sufficiently and effectively guarantee the legality of administrative acts. This protection is guaranteed through an administrative judiciary, which is characterized by quality, independence, and efficiency which are key components for an effective justice system as well as essential for protecting individual rights, including in particular fair trial rights.

[42] Natasha Buontempo, *Judicial Review of Administrative Acts in the European Union and in France: A Comparison,* Malta*Id-Dritt*, Vol. XXII (2010). Available at: http://works.bepress.com/natashabuontempo/1/.

[43] Tom Ginsburg, *Judicial Review in New Democracies - Constitutional Courts in Asian Cases,* Cambridge University Press, 2003, p. 227.

[44] Arta Vropsi, *Due process of the law in case-law of Constitutional Court of Albania.* Tirana, 2011, p. 144.

Every individual having a legal interest in challenging an administrative action may file a case before the competent court to seek an annulment of or void an administrative act which is not in accordance with constitutional provisions, laws and other sub-legal acts. Courts should pay particular attention to requirements derived from the principle of impartiality. In a rule of law system, the duty of the state's courts is to adhere to the requirements of the impartiality principle in line with European and international human rights standards, as it positively impacts the citizens' trust in justice, and that not only affected parties, but also ordinary citizens.

Finally, a legally accountable administrative justice system is an appropriate mechanism to control the work of administrative bodies through independent, impartial and free courts outside of administration or executive influence and control. Thus, in a democratic society, judicial review of administrative acts becomes a mandatory tool for citizens who want to challenge administrative acts. Furthermore, it improves the quality of administrative actions and, concurrently, upholds good governance principles that are essential for a democratic country.

Review

Geiger & Khan & Kotzur: EUV/ AEUV Kommentar[1]

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The European integration project has been one of the success stories of the last century. The predominant *Zeitgeist* during this period was to advance this project by deepening mutual cooperation, encapsulated in the famous formula of an '*ever closer Union'*. Yet the European Union[2] has changed profoundly since its beginnings in the post war period. It no longer consists of the original six Member States, but has expanded to 28 States with diverse social and economic characteristics and – most notably - with diverging interests. Some therefore began to question the concept of an '*ever closer Union'*. Most notably the British who voted for a withdrawal from the EU in June 2016. Yet Brexit is not the only problem facing the EU today: The rule of law crisis in Hungary and Poland, the migration crisis and the Eurozone crisis also pose significant challenges for the Union. In these troubled waters clear legal guidance is important. The new edition of the commentary by Rudolf Geiger, Daniel-Erasmus Khan and Markus Kotzur provides such guidance. It covers, for instance, recent developments concerning Brexit (see the annotations on Article 50 TEU). In particular, it provides the necessary overview of the withdrawal procedure and emphasises that the withdrawal agreement – which is currently negotiated by the EU and the UK representatives – is not a *conditio sine qua non* for withdrawal. Even if the UK and the Union fail to conclude such an agreement by the end of March 2019, the UK will nonetheless withdraw from the EU pursuant to Article 50 III 1 TEU. This is not only analysed in a clear and structured way by the authors, but what proves also to be very helpful is the list of current literature on the topic. For each article the authors provide such a list, which is not only restricted to German literature but also covers articles in international journals – a feature that will surely be welcomed by the academic community.

The evident strength of this commentary is its focus on the essential aspects of each Treaty provision, even though the overall volume of the book has slightly increased (in comparison with the last edition). This is mainly – but not exclusively - due to the changes occurring in the field of Economic and Monetary Union – which has experienced a substantial elaboration by the CJEU. The judgements by the CJEU in Pringle and Gauweiler are a case in point. Both receive the necessary degree of analysis by the authors in the commentaries on Article 125 TFEU and Article 127 TFEU. The new fiscal compact – though concluded outside the EU Framework – is also briefly outlined and its relationship with the respective TFEU-articles examined.

The concept of the book as a "short commentary", of course, means that not each and every aspect of European Union law can be analysed in a comprehensive scientific manner. Nonetheless, for those interested in a more detailed analysis, the literature list annexed to each article provides a good starting point. Hence both legal scholars as well as practitioners will find this book useful in their daily work. Law students, too, might like to swap the standard textbook of a course for this commentary, which is often more succinct and precise than the former. Also the layout is extremely user-friendly: It is clearly structured and

[1] Beck, München 2016.

[2] Or EEC as it was called back then.

contains the key words in bold type. One suggestion, though, would be to include the reference in footnotes instead of integrating them into the main text.

In sum, the new edition of the commentary by Geiger/Khan/Kotzur, which are now supported by a team of five lawyers to manage this Herculean task, is an essential read by anyone interested in EU Law. It is easily accessible, clearly structured and focuses on the essential aspects (while at the same time not lacking in substantive content). This mix makes the book so unique among the increasing number of commentaries available on the market these days.