TRANSNATIONAL CORPORATIONS AS A CHALLENGE FOR CONTEMPORARY INTERNATIONAL SPACE LAW

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This article considers the legal aspects of space activities of transnational corporations. In today's world private entities took over space conquest initiative started by the states. However, the international space law regime is over half-century-old and does not respond to contemporary challenges. This article includes a detailed analysis of three particular problems: ownership, liability and status of flight participants. The author concludes that there are more and more questions that the existing regulations fail to answer.

Keywords: transnational corporations, space law, astronauts, asteroid mining, outer space, treaty, international liability

1. The Rise of Transnational Corporations

Transnational corporations[1] are widely considered by scholars as one of the major challanges for contemporary international law.[2] On the one hand they gained extraordinary powers due to their wealth and resources possessed and their influence on international relations and international community.[3] Many of them operate in dozens of states and their annual budgets exceed those of most states. On the other hand, international law seems to hardly notice their existence.

There are only few areas of international law, in which transnational corporations are expressly granted rights and obligations. For example, in international maritime law the United Nations Convention on the Law of the Sea allows them to sign contracts with the Sea Organization and provides with competences to be parties to disputes before

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[1]According to the draft Norms on the Responsibilities of Transnational Corporations and Other Business Enterprises with Regard to Human Rights, prepared by th UN. Subcommission on the Promotion and Protection of Human Rights. Working Group on the Working Methods and Activities of Transnational Corporations, U.N. Doc. E/CN.4/Sub.2/2003/12/Rev.2 (2003) the term "transnational corporation" refers to an economic entity operating in more than one country or a cluster of economic entities operating in two or more countries - whatever their legal form, whether in their home country or country of activity, and whether taken individually or collectively, at 20.

[2]S. Kirchner. Recognition and Responsibility: A Legislative Role for Transnational Corporations in Public International Law – Thoughts from the Perspective of Human Rights // The Indian Journal of International Economic Law, 2015, vol VII. P. 120.

[3]K. Nowrot. New Approaches to the International Legal Personality of Multinational Corporations Towards a Rebuttable Presumption of Normative Responsibilities, http://www.esil-sedi.eu/sites/default/files/Nowrot.PDF 12.11.2018 (access). P. 1.

International Tribunal for the Law of the Sea.[4] Corporations also sign multilateral international agreements, like INTELSAT (1971) and INMARSAT (1976),[5] bilateral international agreements (investment agreements)[6] and can sue states before European Court of Human Rights.[7]

However, apart from the above-mentioned exceptions, international corporations are considered to act in a legal vacuum. On the one hand national law, which by its very nature is limited to state borders, is unable to effectively regulate transnational corporations. On the other hand international regulations are missing. This is true for example for international human rights,[8] criminal,[9] humanitarian[10] and space law. This last example is discussed in detail in this article.

2. The Development of Space Flights and International Space Law

The space race between nations started for good with the launch from Baikonur Cosmodrome in Kazakhstan of the first artificial satellite by the Soviet Union in 1957. Shortly after that, the first man was sent to space (1961) and the first man landed on the Moon (1969). For decades it was only states which continued activity in outer space due to both extremely high costs of such undertakings and a threat of using it for military purposes by enemy states. It was not until 1984 that the first commercial satellite entered outer space. In 2013 for the first time private company, hired by NASA, supplied the International Space Station. NASA stopped sending spaceships on its own at all[11] as it is more cost effective to use private companies. Today the space activities are aimed at space tourism, asteroid mining and landing by humans on Mars as soon as possible[12]. Currently only in the United States there are 13 private corporations which were granted licenses for space launches. The list includes such companies as Space Exploration

[4]United Nations Convention on the Law of the Sea, signed in Montego Bay on 10th of December 1982, entered into force on 16th November 1994, article 153 section 2, Annex III articles 4, 6, 7, Annex IV article 39.

[5]K. Karski. Osoba prawna prawa wewnętrznego jako podmiot prawa międzynarodowego. Warszawa, 2009. P. 202-203.

[6]See J. Arato. Corporations as Lawmakers // Harvard International Law Review, vol. 56, no 2, summer 2015.

[7]M. Emberland. The Human Rights of Companies. Oxford, 2006. P. 3.

[8]United Nations Human Rights Council, Interim Report of the Special Representative of the Secretary General on the Issue of Human Rights and Transnational Corporations and Other Business Enterprises, U.N. Doc. E/CN.4/2006/97, para. 66.

[9]See K. Karski, op. cit. P. 266-267.

[10]K. Ontiti. Private Military Companies: the Challengees They Pose in Contemporary Armed Conflicts // East African Law Journal, 2005, vol. 2. P. 161.

[11]C. Albert. Liability in International Law and the Ramifications on Commercial Space Launches and Space Tourism // Loyola of Los Angeles International & Comparative Law Review, 2014, vol. 36. P. 236-238.

[12]H. Svonavec. Saving Space with Un-Authorized Acts: Questioning the Authority of the United Nations to Oversee Humankind's Exploration and Development of Outer Space // Journal of Law and Commerce, 2017, vol. 36, no 1, p. 57; J. McKinley. Space Tourism Is Here! Wealthy Adventurers Wanted // New York Times, 7th September 2012 https://www.nytimes.com/2012/09/09/travel/space-tourism-is-here-wealthy-adventurers-wanted.html, 12.11.2018 (access); C. Albert, op. cit., p. 235; B. Abrams, First Contact: Establishing Jurisdiction over Activities in Outer Space // Georgia Journal of international and Comparative Law. 2014, vol. 42. P. 799.

Technologies Corporation (SpaceX), Virgin Galactic and Lockheed Martin Commercial Launch Services.[13]

The International Space Law has been adopted by states in 1960s and 1970s and includes five treaties, drafted by the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS): the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies (the "Outer Space Treaty"),[14] the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (the "Rescue Agreement"),[15] the Convention on International Liability for Damage Caused by Space Objects (the "Liability Convention"),[16] the Convention on Registration of Objects Launched into Outer Space (the "Registration Convention")[17] and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (the "Moon Treaty").[18] Since that time, even though the situation in the space activities development changed dramatically, the law has not been updated. In particular it does not recognize the status that transnational corporations actually have. As a consequence there arose several practical problems that are difficult to solve under current law.

3. Real Rights in Outer Space

According to the Outer Space Treaty „the exploration and use of outer space, including the Moon and other celestial bodies, shall be carried out for the benefit and in the interests of all countries"[19] and the „outer space, including the Moon and other celestial bodies, is not subject to national appropriation by claim of sovereignty, by means of use or occupation, or by any other means."[20] Some authors interpret it, that if states are not allowed to appropriate outer space, much less that could be done by private entities.[21] F. Tronchetti goes even further and claims that absolute prohibition of appropriation of outer space by anybody is a customary law.[22] However, due to the exact wording of the cited provision, the opposite interpretation (a contratio) could also be supported. Additionally, it is not

[13] United States Department of Transportation, Federal Aviation Administration, https://www.faa.gov/data_research/commercial_space_data/licenses/ 12.01.2018 (access).

[14] Adopted by the General Assembly in its resolution 2222 (XXI), opened for signature on 27 January 1967, entered into force on 10 October 1967.

[15] Adopted by the General Assembly in its resolution 2345 (XXII), opened for signature on 22 April 1968, entered into force on 3 December 1968.

[16] Adopted by the General Assembly in its resolution 2777 (XXVI), opened for signature on 29 March 1972, entered into force on 1 September 1972.

[17] Adopted by the General Assembly in its resolution 3235 (XXIX), opened for signature on 14 January 1975, entered into force on 15 September 1976.

[18] Adopted by the General Assembly in its resolution 34/68, opened for signature on 18 December 1979, entered into force on 11 July 1984.

[19] Article I.

[20] Article II.

[21] G. Oduntan, Aspects of the International Legal Regime concerning Privatization and Commercialization of Space Activities, Law & Ethics, Winter/Spring 2016, vol. XVII, no I, p. 81.

[22] F. Tronchetti, The Non-Appropriation Principle as a Structural Norm of International Law: A New Way of Interpreting Article II of the Outer Space Treaty, Air & Space Law, 2008, vo. 33, no 3. P. 277.

entirely clear, whether this prohibition refers also to natural resources of celestial bodies. This controversy is further supported by the fact, that according to the International Space Station Intergovernmental Agreement[23] article I section 1 „this civil international Space Station will enhance the (…) commercial use of outer space." The Moon Treaty leaves no place for doubts in article 11, but it has been ratified by only few states.[24]

The problem of ownership in outer space pertains not only to the Moon and celestial bodies but also to specific empty spots. Earth-orbiting satellites, in particular geostationary, are commercially very valuable for telecommunications industry. How ever, the space on Earth orbits is limited, so only a limited number of satellites can fit.[25] Since satellites owners cannot dispose their spot, when they do not need it anymore, they simply abandon their satellites, contributing to the spread of space debris, instead of selling the spot to somebody, who wants it.[26] It is also worth mentioning that, despite article II of the Treaty on Outer Space, some states argue for sovereign rights to geostationary orbit. They expressed it in the 1976 Declaration of the First Meeting of Equatorial Countries[27] signed by over a half of the world's equatorial states.[28] Some authors propose organizing auctions in which interested parties would bid, so that the empty spots are sold for the highest possible price.[29] Others support „first come first served" rule. With respect to asteroid mining, some suggest that asteroids should be considered movables and for this reason exempted from the prohibition.[30] Space mining could also be internationally govern, similarly to the seabed mining according to the United Nations Convention on the Law of the Sea.[31] One should also be aware, that for decades some private companies have been selling rights to pieces of celestial bodies, such as Moon or planet Mars. They claim that the Outer Space Treaty does not exclude possibility of private entities owning them.[32] This legal chaos is caused by ambiguities of the International Space Law.

The main motivation of settlers, heading to new territories, is hope to acquire ownership of a piece of land. This explains why historically at some point individuals took over the initiative from the states and were the first ones to explore the unknown.[33] Space

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[23]The International Space Station Intergovernmental Agreement, signed on 29 January 1998.

[24]United Nations Treaty Collection, https://treaties.un.org/Pages/ViewDetails.aspx?src=IND&mtdsg_no=XXIV-2&chapter=24&clang=_en, 12.11.2018 (access).

[25]B. Beck. The Next, Small, Step for Mankind: Fixing the Inadequacies of the International Space Law Traty Regime to Accomodate the Modern Space Flight Industry // Albany Law Journal of Science and Technology, 2009, vol. 19, no 1. P. 25-26.

[26]B. Beck, op.cit. P. 27.

[27]Declaration of the First Meeting of Equatorial Countries, signed in Bogota on 3rd December 1976.

[28]Brazil, Colombia, Congo, Ecuador, Indonesia, Kenya, Uganda and Zaire.

[29]L.D. Robert. A Lost Connection: Geostationary Satellite Networks and the International Telecommunications Union // Berkeley Technology Law Journal. 2000, vol. 15, p. 1098, 1135.

[30]B. Abrams, op. cit. P. 810-813.

[31]A. Ferreira-Snyman. Legal Challenges Relating to the Commercial use of Outer Space, with Specific Reference to Space Tourism // Potchefstroom Electronic Law Journal. 2014, vol. 17, no 1. P. 39.

[32]LunarLand.com, https://www.lunarland.com/about-us, 12.11.2018 (access), Lunar Embassy, https://lunarembassy.com/head-cheese/, 12.11.2018 (accesss).

[33]M.R. Laisné. Space Entrepreneurs: Business Strategy, Risk, Law, and Policy in the Final Frontier // The John Marshall Law Review. 2013, vol. 46. P. 1039.

activities require huge investments[34] and therefore are performed by corporations[35] rather than (even very rich) private persons. In order for the space conquest to continue, private companies must have sufficient incentives, which include, in particular, some kind of real rights. Even though some authors claim, that ownership rights are not critical for the development of space activities,[36] it seems illogical. If no legal protection is provided, would anybody be interested to invest hundreds of millions of dollars, risking their assets to be taken over by states at will? Also one would be defenseless against the competitors.

4. Liability for Space Activities

According to article VI of the Outer Space Treaty ”States Parties to the Treaty shall bear international responsibility for national activities in outer space (…) 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.” In the opinion of S. Freeland, the liability principle from article VI, that determines that it is the states which are exclusively liable for space activities, has got a status of international customary law.[37] Article VII adds: ”(e)ach State Party to the Treaty that launches or procures the launching of an object into outer space,(…) and each State Party from whose territory or facility an object is launched, is internationally liable for damage to another State Party to the Treaty or to its natural or juridical persons by such object (…).” The text of this article does not require fault to be attributed in order to bear liability.[38]

According to article II of the Liability Convention ”(a) launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the Earth or to aircraft in flight.” Article III adds: ”In the event of damage being caused elsewhere than on the surface of the Earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State, the latter shall be liable only if the damage is due to its fault or the fault of persons for whom it is responsible.” Clearly fault is required only in the latter circumstances. Also the damage must be caused by a space object, therefore the damage caused by natural persons is not covered.[39] Even though in this case liability for non-governmental space objects is not specifically mentioned, it seems obvious to fit within the scope of this article.[40] What is missing though is liability for space objects not sent to outer space, but built there.[41]

Since the greatest space catastrophes occurred not in outer space, but by launching space

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[34]M.R. Laisné, op. cit. P. 1040-1041.

[35]Ibidem. P. 1048.

[36]A.W. Salter, P.T. Leeson. Celestial Anarchy: A Threat to Outer Space Commerc? // Cato Journal. 2014, vol. 34, no. 3. P. 586-590.

[37]S. Freeland. Fly Me to the Moon: How will International Law cope with Commercial Space Tourism? // Melbourne Journal of International Law. 2010, vol. 11. P. 17.

[38]C. Albert, op. Cit. P. 245.

[39]B. Beck, op.cit., p. 23; B. Abrams, op. cit. P. 799.

[40]A. Ferreira-Snyman. P. 33.

[41]D. St. John. The Trouble with Westphalia in Space: The Space-Centric Liability Regime // Denver Journal of International Law and Policy. 2012, vol. 40. P. 696.

objects (explosions of „Challenger" in 1986 and „Columbia" in 2003) the only case when Convention on liability was applied was after the collapse of a soviet satellite "Cosmos 954" in the territory of Canada in 1978. The case was settled by the parties and the Soviet Union paid 3 million dollars.[42] One can wonder, how would a state behave in case of liability for damages caused by commercial company.[43] Would it be so eager to pay compensation?

As it was already mentioned, the Outer space treaty and the Convention on Liability are silent on liability of natural persons. Also application of national tort law to such situations is hardly a satisfying solution.[44] The same is true for situations in which natural persons are the aggrieved party. One may have to deal with serious jurisdiction problems.[45] Some scholars even propose the establishment of an international court for space disputes, in which a natural person hase a standing to sue.[46] If drafted carefully, such solution could also solve the problem of "lifting of the corporate veil" (that is of lack of liability of parent companies for damages cause by subsidiary companies).

According to the International Law, only states are liable for damages caused by companies. How ever there are differences in national law with respect to the liability of companies themselves. In the United States space companies are liable for damages to up to 500 million dollars, than it is the state that is liable for up to 1,5 billion dollars as of 1988 (after taking in the account the inflation) and beyond that limit – again the companies are liable.[47] In China, Russia and Europe the first threshold is much lower and the third one does not exist.[48] These differences may result in a forum shopping problem.[49] Companies could search for the least strict regulations - such practice is evidenced by the „flags of convenience" problem in the international law of the sea regime.[50] Of course one should keep in mind, that these are just internal regulations – internationally it is only the state which is liable. But the question remains – since private companies operate for profit and provide services to other private entities, why should the states be liable for their activities?[51] In international air law and international law of the sea there is no such principle that states are liable for private entities activities.[52]

5. The Status of the Space Flight Participants

The problem of the status of tourists travelling in outer space (and also to smaller extent the members of crews for such flights) arose in the 21st century.[53] M.R. Laisné expressed

[42]B. Beck, op.cit. P. 15.

[43]C. Albert, op. cit. P. 255.

[44]B. Beck, op.cit. P. 30.

[45]B. Abrams, op. cit. P. 817-821.

[46]Ibidem, p. 820-823.

[47]Ibidem, p. 248-249. See also M.R. Laisné, op. cit. P. 1040-1044.

[48]C. Albert, op. cit. P. 249.

[49]C. Albert op. cit. P. 235.

[50]Ibidem. P. 251.

[51]Ibidem. P. 254-259.

[52]B. Beck, op.cit. P. 15.

[53]The first space tourtost, American businessman Dennis Tito, travel to the International Space Station on Russian spaceship in 2001.

an opinion, that space tourism is crucial for the development and future funding of other space activities.[54]

The principal notion with regard to people flying to outer space is „astronauts" (Soviets used name „cosmonauts").[55] International law does not define in though. According to the Outer Space Treaty article 5 the astronauts are „envoys of mankind" and states shall render to them all possible assistance in the event of accident, distress, or emergency landing. Wording „envoy of mankind" suggests a status higher than for example ambassador,[56] but there are no provisions on privileges and immunities of such persons.[57] The Rescue Agreements include the term „astronauts" in its title and preamble, but in none of the articles. Instead the Agreement uses the term „personnel of a spacecraft".[58] It is doubtful that space tourist, with almost no training, should be considered envoys of mankind or even personnel of a spacecraft.[59]

Liability Convention does not mention astronauts. It does, however, regulate liability for damages done to natural persons.[60] Article VII exempts states from liability to those persons, who are nationals of the launching state or participate in the operation of that space object from the time of its launching until its descent. Term "participate" seems to include passengers (tourists) and possibly even ground personnel.[61]

Considering the above mentioned terms, it seems, that calling an envoy of mankind a person, who travels simply for pleasure, is hardly justified (the same is true for the crew of a commercial spacecraft). Equally improper would be to call tourists personnel of a spacecraft. By analogy, in air law and maritime law there is a clear distinction between the crew and passengers.[62] On the other hand, as for now all space tourist do have some training.[63] But what happens if spacecraft is wholly operated from the Earth – is the pilot an astronaut or at least personnel of a spacecraft?[64] In any case it is difficult to find any connection between tourist space flights and benefit of all countries.[65]

According to article 5 section 5 of the Rescue Agreement "(e)xpenses incurred in fulfilling obligations to recover and return a space object (…) shall be borne by the launching authority." A contrario, one may conclude that costs of saving astronauts should be borne by the state, which undertook such action. The question is, whether this rule applies to saving tourists too.[66] They are definitely not envoys of mankind. Most scholars

[54]M.R. Laisné, op. cit. P. 1050.

[55]F. Lyall, P.B.Larsen, Space Law: A Treatise, Ashgate Surrey 2009. P. 130 footnote 1.

[56]S.A. Mirmina, Astronauts Redefined: The Commercial Carriage of Humans to Space and the Changing Concepts of Astronauts under International and U.S. Law, FIU Law Review, 2015, vol. 10. P. 671.

[57]A. Ferreira-Snyman, op. cit., s. 17, przypis 105.

[58]Articles 1-4.

[59]S.A. Mirmina, op. cit. P. 671-672.

[60]E.g. articles I, VIII and IX.

[61]B. Beck, op.cit. P. 21.

[62]F. Lyall, P.B. Larsen, op. cit. P. 128.

[63]A. Ferreira-Snyman, op. cit. P. 19-20.

[64]S.A. Mirmina, op. cit. P. 672.

[65]B. Beck, op.cit. P. 7.

[66]A. Ferreira-Snyman, op. cit. P. 26.

believe that functional interpretation of this provision results in a conclusion, that they are covered by the treaty too.[67]

Another controversial regulation is in article IV of the Rescue Agreement. It provides that the personnel of a spacecraft should be safely and promptly returned to representatives of the launching authority. Nowadays, when space flights ceased to by national missions and tourists may have nationality of any state, why shouldn't this state have a right to claim its citizen? Consequently, why not to return space objects to their owners (e.g. transnational corporations) instead of to their states of origin in accordance with article V section III? Once again the existing regulations seem obsolete and impractical.[68]

The above analysis brings us to yet another problem which is lack of precise border between outer space and air territory.[69] If we do not know where the outer space begins, how can we say for certain, whether a flight is a space flight, and if so from which moment. What about if a spacecraft spends on an orbit only a few minutes and the majority of the flight is in aerial territory? Should they be classified as spaceflights?[70] One could follow a functional rather than formal approach, that the decisive factor is the purpose of the flight.[71] But the existing law, neither international agreements nor international custom, do not seem to support this view.

Let's discuss one more scenario: what if a spaceship is transported through aerial territory on a specially designed airplane and is launched from it:[72] This is not a science-fiction novel, such technology is used today. Is it a space flight or an air flight? Or maybe they are two separate flights? As it is evidenced by the above analysis space flights organized by commercial operators bring a lot of new questions, to which contemporary international law finds no answers. The Rescue Agreement so far has never been applied (with the exception maybe of Soviet Union's radio silence during rescue operation or "Apollo 13").[73] However, the law should be ready to be applied when the time comes. As for now there are many doubts, whether it could work effectively.

В. Зиемблицки: Транснациональные корпорации как вызов современного международного космического права.

В статье рассматриваются правовые аспекты космической деятельности транснациональных корпораций. В современном мире частные субъекты берут на себя инициативу завоевания космического пространства, начатую государствами. Однако, режиму международного космического права уже более половины века, и этот режим не отвечает современным вызовам. Эта статья включает в себя подробный анализ трех конкретных проблем: права собственности, ответственности и статуса участников полета. Автор приходит к выводу, что в этом вопросе все больше и

[67]M.J. Sundhal. The Duty to Rescue Space Tourists and Return Private Spacecraft // Journal of Space Law. 2009, p. 178; A. Ferreira-Snyman, op. cit. P. 27-28

[68]B. Beck, op.cit. P. 19.

[69]J. Barcik, T. Srogosz. Prawo międzynarodowe publiczne. Warszawa, 2017. P. 308.

[70]B. Abrams, op. cit., p. 808; G. Oduntan, op. cit. P. 86.

[71]A. Ferreira-Snyman, op. cit. P. 10-12.

[72]A. Ferreira-Snyman, op. cit. P. 12.

[73]B. Beck, op.cit. P. 14.

больше вопросов, на которые существующие правила не могут ответить.

Ключевые слова: транснациональные корпорации, космическое право, астронавты, добыча астероидов, космическое пространство, международный договор, международная ответственность

B. Зиемблицки: Трансұлттық корпорациялар заманауи халықаралық ғарыш құқығының тегеуірінді талабы ретінде.

Мақалада трансұлттық корпорациялардың ғарыш қызметінің құқықтық қырлары қарастырылады. Қазіргі заманда жеке субъектілер мемлекеттер бастаған ғарыш кеңістігін игеру бастамашылығын өз қолдарына алды. Алайда, халықаралық ғарыш құқығы режиміне жарты ғасырдан асты және бұл режим заманның тегеурінді талаптарына жауап бермейді. Бұл мақалада нақты үш проблема егжей-тегжейлі талданады: меншік құқығы, ұшуға қатысушылардың жауапкершілігі және мәртебесі. Автор бұл мәселелерде қолданыстағы ережелер жауап бере алмайтын сұрақтар аясы күн санап артып бара жатыр деген қорытынды жасайды.

Түйін сөздер: трансұлттық корпорация, ғарыш құқығы, астронавтар, ғарыш кеңістігі, халықаралық келісімшарт, халықаралық жауапкершілік.

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