JURISDICTIONAL COMPLEXITIES IN OUTER SPACE: WHO GOVERNS CRIMES COMMITTED BEYOND EARTH?

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Introduction

1. A NASA astronaut reportedly hacked into her estranged husband's bank account in August 2019, aboard the International Space Station (ISS), invoking questions about criminal law applicable in space. Both parties were U.S. nationals and it happened on the ISS, which is under an international treaty that allocates jurisdiction based on nationality. U.S. law became relevant as a result. Cases of dual nationalities, varying nationalities, or deeds outside of the ISS might complicate jurisdiction.

2. With more than 50 nations participating in space activities and 95 members of the UN Committee on Peaceful Uses of Outer Space by 2020, the legal consequences of growing space activity are considerable. The OECD points out that technological innovation has accelerated outer space activities, increasing legal challenges, particularly regarding jurisdiction.[1]

3. Space plays a role in health, agriculture, disaster mitigation, communication, and others. Technologies such as scratch-resistant glasses and freeze-drying have Earth applications. With the expansion of space tourism, military activities, and private initiatives, criminal activity in space can increase, making current legal frameworks obsolete. Despite attempts to demilitarize space, it is already militarized.

4. Space, as the High Seas, is ***res communis**—owned by everyone, not any one state. Classical jurisdictional rules—nationality, universality, protection, and effects doctrine—are constrained in space because there is no state sovereignty. Space law forbids national appropriation, so Earth-based legal principles may not apply

[1] 'Ireland-Piper, Danielle, and Steven Freeland. "Star laws: Criminal jurisdiction in outer space." J. Space L. 44 (2020): 44.'

completely.

5. This article investigates which criminal law applies to space and addresses extraterritoriality, identifying existing space law, jurisdictional issues, and classifying crimes into three categories: those on the ISS, on commercial space vehicles, and in space outside structured vessels.

Concept/Theory

1. The **Outer Space Treaty** declares that outer space is a common area of all mankind and cannot be appropriated by a state. **Articles VI and VIII**[2] grant jurisdiction to states over space objects and personnel they send into space, irrespective of nationality. There remains uncertainty, though, about space tourists and activities beyond spacecraft.

2. The **Intergovernmental Agreement (IGA) for the International Space Station (ISS)** prescribes jurisdictional principles between Partner States—Canada, Japan, the U.S., Russia, and Europe. **Article 22**[3] establishes criminal jurisdiction by nationality with a provision for asserting passive jurisdiction in case the home state refuses prosecution. It also allows extradition under domestic law and promotes cooperation in minimizing harm. Article 22 has been considered by some a template for the future jurisdiction of extraterrestrial jurisdiction but is also criticized on sovereignty issues, procedural rights, and limits of enforcement.

3. The **International Criminal Court (ICC)** can assert jurisdiction on space crimes like genocide or war crimes as long as a respective state is a signatory of the **Rome Statute.** However, enforcement is still impractical.

4. **National courts** remain important forums for the adjudication of outer space crimes, even though they do not have well-defined jurisdictional frameworks. In the future, specialized legal systems or tribunals may be called upon to handle the special problems of criminal responsibility in space.

[2] 'Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, entered into force Oct. 10, 1967, art. 6&7 18 U.S.T. 2410, 610 U.N.T.S. 205 [hereinafter Outer Space Treaty].'
[3] 'Intergovernmental Agreement (IGA) for the International Space Station, art. 22, Jan. 29, 1998'

Relevant Laws/Ethics

1. Five primary treaties presently govern space activities, namely: the Outer Space Treaty, the Rescue Agreement, the Liability Convention, the Registration Convention, and the Moon Agreement. As of January 2019, the Outer Space Treaty had 109 ratifications and 23 signatures; the Rescue Agreement had 98 ratifications and 23 signatures, along with two declarations acknowledging rights and obligations; the Liability Convention had 96 ratifications and 19 signatures, plus three declarations acknowledging rights and obligations; the Registration Convention had 69 ratifications and three signatures, in addition to three declarations acknowledging rights and obligations; and the Moon Agreement had 18 ratifications and four signatures. We will now concisely summarise these five principal agreements.

2. The **Outer Space Treaty** essentially promotes ethical conduct, asserting that the exploration and utilisation of outer space should be available to all states and free from any claims of sovereignty. The Moon and other celestial bodies should be employed solely for peaceful reasons. Thirty-three states are prohibited from placing weapons of mass destruction in orbit or outer space, and the militarisation of celestial bodies is forbidden. Thirty-four states are responsible for national space activities and are liable for damages inflicted by their space objects. The Rescue Agreement requires States to implement all practicable actions to rescue and assist endangered astronauts, promptly return them to their launching State, and support launching States in the recovery of space objects that re-enter Earth outside their jurisdiction.[4]

3. According to the **Liability Convention,** which delineates processes for addressing claims for damages, a launching State is required to indemnify for harm caused by its space objects and is liable for damage arising from their flaws in space. **The Registration Convention** requires States and specific international intergovernmental bodies to create national registries and provide information about their space objects to the Secretary-General of the United Nations. **The United Nations Office for Outer Space Affairs** indicates that eighty-nine percent of all satellites, probes, landers, crewed spacecraft, and components of space station flights launched

[4] 'Ohmer, Caleb. "When Galaxies Collide: Resolving Criminal Jurisdiction Disputes among Nations in Space." J. Space L. 43 (2019): 344.'

into Earth orbit or beyond have been registered. However, the implementation of broad networks of small satellites and the trend towards miniaturisation may complicate future registrations. Registration is conducted freely in accordance with **General Assembly Resolution 1721B44** and remains utilised by States not bound by the Registration Convention.

4. The **Moon Agreement** predominantly reiterates and expands upon several provisions of the Outer Space Treaty related to the Moon and other celestial entities. It claims that the Moon and celestial entities may be employed exclusively for "peaceful purposes" and that the Moon and its natural resources represent the collective heritage of humanity. It also implores parties to create an international framework to govern the exploitation of resources when such exploitation is imminent. **The International Space Station Intergovernmental Agreement (IGA)** is significant in relation to criminal law jurisdiction. The IGA is an international agreement signed on January 29, 1998, by the nations involved in the ISS effort. The IGA, although not an exhaustive treaty, functions as a rare "positive source of criminal law" in outer space and will be analysed in further detail below.[5]

5. Seven space treaties are complemented by five essential declarations and principles about space: the Declaration of Legal Principles, the Broadcasting Principles, the Remote Sensing Principles, the Nuclear Power Source Principles, and the Benefits Declaration.

Relevant Cases

1. In ***Domukovsky v. Georgia***[6]**,** the Human Rights Committee held that unlawful extraterritorial jurisdiction may contravene **Article 9 of the ICCPR**[7]. Mr. Domukovsky, a Russian national prosecuted in Georgia for terrorism, alleged that following Azerbaijan's rejection of Georgia's extradition request, he was abducted from Azerbaijan in April 1993 and illegally detained. Georgia argued his arrest was pursuant

[5] 'Ratner, Stacy J. "Establishing the Extraterrestrial: Criminal Jurisdiction and the International Space Station." BC Int'l & Comp. L. Rev. 22 (1999): 323.'
[6] 'Domukovsky v. Georgia, (1999) 6 IHRR 55'
[7] 'International Covenant on Civil and Political Rights, art. 9, adopted Dec. 16, 1966, 999 U.N.T.S. 171, [UN doc. E/CONF.67/22/Rev.1].'

to a bilateral criminal cooperation agreement. The Committee ruled the arrest breached Article 9(1) of the Covenant.

2. In ***Nemitz v. United States***[8]***,*** the plaintiff asserted ownership of an asteroid upon which NASA landed a probe in 2001. The court rejected his claim, not on grounds of appropriation, but for failure to have valid title to land.

3. In ***Beattie v. United States***[9], after an Air New Zealand crash that caused deaths in Antarctica, plaintiffs had sued the U.S. pursuant to the **Federal Tort Claims Act (FTCA).** The D.C. Court of Appeals construed the Antarctic Treaty and held Antarctica, similar to outer space and the high seas, is not U.S. nor foreign land. It concluded the FTCA was applicable and D.C. law applied.

4. Subsequently, in ***Smith v. United States***[10], in which a contractor was killed in Antarctica, the Supreme Court reversed Beattie. Chief Justice Rehnquist ruled that the FTCA's waiver of sovereign immunity did not apply to Antarctica, as Congress did not wish to extend such a barren and dangerous place to the waiver of sovereign immunity. The ruling identified the boundaries of terrestrial legal regimes in extreme or extraterritorial contexts.

Critical Analysis

1. Contemporary space law depends most on nationality-based jurisdiction, an analogy to the use of the same on the planet. Nonetheless, international law is agnostic about the ways states attribute nationality, and conflicts arise when persons possess dual citizenship. The **principle of passive nationality**—asserting jurisdiction over offences against the nationals of a state—is particularly objectionable in outer space due to ambiguity regarding the nationalities of others and its controversial nature within international law. These limitations warrant special space-based nationality regulations.

2. <u>The line between airspace and outer space is not defined.</u> Although commonly regarded as the region above Earth's airspace, the Outer Space Treaty doesn't define where outer space starts. This makes a difference to astronaut status, military reconnaissance, and

[8] 'Nemitz v. United States No. CV-N030588-HDM, 2004 WL 3167042 (D. Nev. Apr. 26, 2004)"
[9] 'Beattie v. United States, 690 F. Supp. 1068 (D.D.C. 1988)'
[10] 'Smith v. United States, 599 U.S. 236 (2023)'

legal authority. One way is to take a fixed altitude (e.g., 80 km or 100 km, according to Australia's legislation or the Kármán line). Alternatively, the difference can be based on activity—though problematic, as in the case of the US Space Shuttle, which operates both aeronautically and astronautically. Due to the gradual thinning of the atmosphere, a universal definition is out of reach. While Australia advocates demarcation for legal certainty in space trade, France is inclined towards a functionalist approach, considering any object destined for space as a "space object" irrespective of whether it enters outer space or not. These conflicting perspectives deter international consensus and make legal jurisdiction more difficult.

3. The advent of **space travel as a tourism industry**—beginning with Dennis Tito in 2001—has provided new jurisdictional difficulties. Entrepreneurs such as Virgin Galactic plan to democratize space travel, but cost is prohibitive to most would-be participants. Tourists are unlike state actors or company workers, who could be acting strangely in space. Blount's suggestion of a "space visa" would expose tourists to the jurisdiction of a state but complicates crimes across nationalities, visa frauds, and differential access. Though **space visas** will help in claims of jurisdiction, they cannot really solve intricate international crimes in space.

4. It is debatable whether the Outer Space Treaty's ban on appropriation extends to private operators. **The Moon Agreement** and **Article VI of the OST**[11] mention non-governmental actors, but ambiguities remain. Private companies may include individuals of varied nationalities, complicating jurisdiction. Though corporate nationality can be defined, it often leads to jurisdictional conflicts. Principles like objective territoriality or the effects doctrine can apply when a company's acts impact a specific state. Universality—applied to offenses such as piracy—can be used to justify prosecuting space-based offenses such as hijacking spacecraft but not others. Private actor involvement also poses attribution issues under international law. According to **Article 5 of the ILC's ARSIWA**[12], if a private actor is exercising governmental authority, its actions can be attributed to the state. Although these provisions are only

[11] 'Outer Space Treaty, Art. VI, UNOOSA'
'https://www.unoosa.org/oosa/en/ourwork/spacelaw/treaties/outerspacetreaty.html'
[12] 'ILC, Draft Articles on the Responsibility of States for Internationally Wrongful Acts with Commentaries, U.N. GAOR, 56th Sess., Supp. No. 10, Ch. IV, U.N. Doc. A/56/10 (2001) [draft article 5].'

applicable to internationally wrongful acts, they can still inform national courts in jurisdictional examination.

5. Human rights law, enshrined in the **ICCPR and ICESCR**, acknowledges human beings as rights-holders under international law. These treaties are extraterritorial in application, which means that states are required to respect rights like fair trial and freedom from arbitrary detention even in outer space. This individual rights emphasis is at variance with classical jurisdictional approaches and provides a normative framework for the regulation of state activity in outer space.

Jurisdictional disputes in outer space, including on the Moon and in interplanetary flights, involve which country can prosecute crimes committed within extraterrestrial contexts. The Outer Space Treaty of 1967 (OST) forbids national appropriation of outer space and celestial bodies and enforces peaceful use and cooperation. The "flag" or "quasi-territorial" principle allows jurisdiction to be attributed to the registering state of a space object, e.g., a spacecraft or station. For international missions such as the International Space Station (ISS), jurisdiction based on nationality is used, according to the nationality of the offender or victim. The ISS Inter-Governmental Agreement also includes the passive nationality principle, giving the state of the victim jurisdiction under specific circumstances. The ISS Crew Code of Conduct (CCOC) provides for onboard commander jurisdiction to ensure discipline and enforcement of rules. As space activity grows, demands for a specialized jurisdictional regime have grown, as classical extraterritorial laws might not be appropriate for space's special environment. In short, a mix of OST principles, nationality rules, and commander authority constitutes the existing framework for criminal jurisdiction in space, although legal development is still needed to deal with future challenges.

Conclusion

1. Space exploration, commercialization, and tourism have led to serious gaps in outer space regulation from the viewpoint of both jurisdiction and law. Current treaty law, i.e., the Outer Space Treaty and the ISS Agreements, has sought to stretch national jurisdiction out into space through principles like registry and nationality. These are no longer effective enough. Criminal offenses on spacecraft are partially covered by extensions of domestic jurisdiction, yet offenses falling in the vast expanse of outer

space are left ambiguously regulated. This lacuna is increasingly so as space tourism expands and private players take over extraterrestrial pursuits.[13]

2. The development of the ISS agreements, particularly **Article 22 of the 1998 Agreement**, reflects the desire of states to cooperate and apply existing international law principles—i.e., nationality and passive personality—to new space realities. These agreements are not enough, however, to deal with the intricacies of criminal jurisdiction in a multi-national, commercialized outer space environment.

3. In order not to have a lawless "Wild West" in space, the global community needs to set up proactively a complete **Outer Space Criminal Statute (OSCS)**. As much as ground-based legal frameworks may be enough at first, it is possible that they can stunt legal development appropriate for extraterrestrial applications. A designed OSCS not only would help avoid jurisdictional anarchy but also provide a legal basis for long-term dwelling and settling on space. Active legal architecture—designs by global accord—will deliver responsibility, security, and fairness to outer space before criminal acts drive reactionary initiatives. Now, prior to when colonization will proceed earnestly, is the time to enact law for humankind's off-planet future.

[13] 'White, Reid. "Plugging the Leaks in Outer Space Criminal Jurisdiction: Advocation for the Creation of a Universal Outer Space Criminal Statute." Emory Int'l L. Rev. 35 (2021): 333.'

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