

Space Force and the Outer Space Treaty: One Small Step Forward for a Man, One Giant Leap Backward for Humankind

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Introduction

ON FEBRUARY 19, 2019, President Trump signed the fourth Space Policy Directive, SPD-4.¹ It contains the potential addition of a sixth branch of the United States Armed Forces housed within the Department of the Air Force called Space Force.² SPD-4's mission is to ensure the use of space for the United States' national security, economy, and people, and SPD-4's commander will lead any future space warfare.³

President Trump's SPD-4, the fourth space directive he has ordered in the last two and a half years, leaves more questions unanswered than answered.⁴ The first Space Policy Directive directed National Aeronautics and Space Administration ("NASA") to land back on the Moon in eventual hopes of getting to Mars.⁵ The second and third Space Policy Directives dealt with

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1. *See* Establishment of the United States Space Force, 84 Fed. Reg. 6049, 6049 (Feb. 19, 2019).

2. *See id.*

3. *See id.* § 3.

4. Mike Wall, *Trump Signs Directive to Create a Military Space Force*, SPACE (Feb. 21, 2019) <https://www.space.com/president-trump-space-force-directive.html> [<https://perma.cc/7VKR-ANUN>].

5. *See id.*

commercialization of space and space traffic.⁶ While these first three SPDs are not inherently militaristic or aggressive in their language, focusing rather on peace and cooperation, Space Force is militaristic in name and nature, deviating significantly from the previous SPDs.⁷

The principal treaty for international space law was enacted and signed by eighty-nine signatory States (countries) in 1967 and has come to be known as The Outer Space Treaty.⁸ It enshrines the principle that all of humanity has the right to peacefully explore space.⁹ The four major treaties following it expand upon the Outer Space Treaty's principles and articles. These four treaties include the Rescue Agreement, a treaty for assisting astronauts in distress, and the Liability Convention, a treaty for holding States liable for damages to other States caused by launched objects.¹⁰

Space Force's mission does not align with any of these international treaties or even the current United States Space Policy. "From Eisenhower to Obama, the U.S. has seen space as a zone for self-defense and non-aggressive military activities."¹¹ There are few actions the United States could take that are more aggressive than forming an entirely new branch of the military dedicated to space warfare.

Yet, the biggest question about this proposed Space Force is: Why? The actual necessity of such a military branch is questionable considering the United States already has an arm of the Air Force dedicated to outer space.¹² Former Astronaut Scott Kelly summarizes the question clearly: "[S]pace has been a place for us to work in a peaceful manner. And, you know, changing that with[out] any clear reason at this point is, like I said, kind of hard to

6. *See id.*

7. *See* Establishment of the United States Space Force, *supra* note 1, §§ 3, 7.

8. *See* Comm. on the Peaceful Uses of Outer Space, Status of International Agreements Relating to Activities in Outer Space as at 1 January 2019, 1–2, A/AC.105/C.2/2019/CRP.3 (Apr. 1, 2019) [hereinafter Status of International Agreements]; *see generally* Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies art. I, Jan. 27, 1967, 18 U.S.T. 2410.

9. *See* Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies art. I, Jan. 27, 1967, 18 U.S.T. 2410.

10. *See* Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, art. II, VIII, Apr. 22, 1968, 19 U.S.T. 7570 [hereinafter Agreement on the Rescue of Astronauts]; Convention on International Liability for Damage Caused by Space Objects art. II, Mar. 29, 1972, 24 U.S.T. 2389.

11. Michael Greshko, *Would a U.S. Space Force Be Legal? Get the Facts.*, NAT'L GEOGRAPHIC (Aug. 9, 2018), <https://news.nationalgeographic.com/2018/06/space-force-trump-legal-military-role-satellites-science/> [https://perma.cc/BLG4-9J9D].

12. *See* Linda Billings, *A US Space Force? A Very Bad Idea!*, 16 THEOLOGY & SCI. 385, 386 (2018).

understand.”¹³

This Comment is about the newest Space Policy Directive, SPD-4, and its major deviation from the entire history of Space Law, including international treaties and past United States policies. In the following section, we will discuss how international treaties have fostered peace and cooperation for over half a century. Then, we will discuss past United States policies, both from the Trump administration and the Obama administration, which have stressed cooperation and economic growth. The sharp contrast between this history and SPD-4’s militaristic goals are more than a little concerning. The future of space exploration, and likely exploitation, hangs in the balance of how the United States and international community respond to this new directive.

I. A Historical Look at International Space Law

As the primary governing law for States entering space, the Outer Space Treaty tends to be the focus of legal discussion regarding space law and policy reform.¹⁴ However, there are also four other major United Nations treaties about outer space that all elaborate or expand parts of the Outer Space Treaty: Rescue Agreement, Liability Convention, Registration Convention, and Moon Agreement.¹⁵

A. The Outer Space Treaty

On January 27, 1967, 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, was enacted and signed.¹⁶ The Treaty was drafted in large part due to the work of a subpart of the United Nations created in 1959: The Committee on the Peaceful Uses

13. See Justine Wise, *Ex-Astronaut Slams Trump’s ‘Space Force’ Proposal: Let’s Deal with Our Current ‘Cyber War’*, HILL (Aug. 3, 2018), <https://thehill.com/homenews/administration/400301-ex-nasa-astronaut-slams-trumps-space-force-proposal-lets-deal-with> [<https://perma.cc/Z9UF-R778>].

14. See Greshko, *supra* note 11; see also Tod A. Northman & Christine M. Snyder, *Off We Go into the Wild Intergalactic Yonder—Defense Department Submits Proposal for ‘Space Force’*, 32 WESTLAW J. GOV’T CONT., Apr. 22, 2019, at 6; see also Adam Irish, *The Legality of a U.S. Space Force*, OPINIOJURIS (Sept. 13, 2018), <http://opiniojuris.org/2018/09/13/the-legality-of-a-u-s-space-force/> [<https://perma.cc/C3QA-735H>]; see also Douglas S. Anderson, *A Military Look into Space: The Ultimate High Ground*, ARMY LAW., Nov. 1995, at 19, 25.

15. See Status of International Agreements, *supra* note 8.

16. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9, at 1.

of Outer Space (“COPUOS”).¹⁷ With 109 ratifying States, including the United States, and twenty-three signatory States, the Outer Space Treaty is arguably the most important body of space law on Earth.¹⁸ Its main purpose is to promote humanity’s peaceful exploration of space.¹⁹

As a product of the Cold War, the Treaty’s seventeen articles are prefaced with a need for States to refrain from placing nuclear weapons into orbit.²⁰ The first five articles state that space should be for all of humanity, and the uses of space should be peaceful.²¹ The following articles promote cooperation across State lines and give the rules for how parties may sign, amend, or withdraw from the Treaty.²²

The three major, governing articles are Articles II, III, and IV. Article II is the non-appropriation clause and says that no State may appropriate any celestial body, including the moon.²³ Article III is the exploration clause and enumerates all States shall follow international law while exploring space.²⁴ Article IV is the weapons clause that, again, bans States from putting nuclear weapons or any other weapons of mass destruction into space or orbit around any celestial body and bans States from putting military bases on celestial bodies.²⁵

While the Outer Space Treaty is broadly written and permits amendments under Article XV, the treaty has never been amended, likely due to its broad language.²⁶

B. The Outer Space Treaty Extensions

There are four major United Nations additions effectively extending the Outer Space Treaty: Rescue Agreement, Liability Convention, Registration

17. See *Committee on the Peaceful Uses of Outer Space*, UNITED NATIONS OFF. FOR OUTER SPACE AFF., <http://www.unoosa.org/oosa/en/ourwork/copuos/index.html> [https://perma.cc/Q96D-MS3T].

18. See Treaty on Principles Governing the Activities of States in the Exploration and Uses of Outer Space, *supra* note 9; Status of International Agreements, *supra* note 8.

19. See Treaty on Principles Governing the Activities of States in the Exploration and Uses of Outer Space, *supra* note 9.

20. See *id.*

21. See *id.*

22. See *id.*

23. See *id.* art. II, 18 U.S.T. at 2413.

24. See *id.* art. III, 18 U.S.T. at 2413.

25. See *id.* art. IV, 18 U.S.T. at 2413–14.

26. See *id.* art. XV, 18 U.S.T. at 2420.

Convention, and Moon Agreement.²⁷

1. The 1968 Rescue Agreement

The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space, more commonly referred to as the Rescue Agreement, was entered into force on December 3, 1968.²⁸ Stressing cooperation, the agreement elaborates on Articles V and VIII of the Outer Space Treaty in a set of ten articles.²⁹

It provides in sum that States shall do everything possible to rescue or help astronauts in distress, including returning them to their launching State, and, if requested, States shall help launching States recover launched objects that have returned to Earth outside their territories.³⁰

2. The 1972 Liability Convention

The Convention on International Liability for Damage Caused by Space Objects (“Liability Convention”) was entered into force on September 1, 1972.³¹ Like the Rescue Agreement, the Liability Convention begins by restating the importance of “strengthening of international cooperation” in space exploration, then elaborates on Article VII of the Outer Space Treaty.³²

The agreement holds launching States strictly liable for damage caused by their launched objects on Earth and to aircraft and for damage in space, if at fault.³³ Most of the agreement covers who is liable, how to bring claims, and how claims will be settled.³⁴

3. The 1976 Registration Convention

The Convention on Registration of Objects Launched into Outer Space (“Registration Convention”) was entered into force on September 15, 1976.³⁵

27. See Status of International Agreements, *supra* note 8 (discussing the status of each Outer Space Treaty and revealing that each treaty takes a portion of space-related laws and expands more so upon it than prior treaty).

28. See Agreement on the Rescue of Astronauts, *supra* note 10.

29. See *id.*

30. See *id.*

31. See Convention on International Liability, *supra* note 10.

32. See *id.* at 2391.

33. See *id.* art. II, III, 24 U.S.T. at 2392.

34. See *id.* art. II, III, VIII, IX, XII, 24 U.S.T. at 2392, 2395–97.

35. See Registration of Objects Launched into Outer Space, Sept. 15, 1976, 28 U.S.T. 695.

It generally continues the trend of international cooperation and answers the call for the identification of launched objects created in the previous treaties.³⁶ The Registration Convention requires States to create a registry of all objects the State launched into space and provide that information to the United Nations.³⁷ This holds States responsible for their launched objects. Most of the Registration Convention covers how the registration must be maintained, how to provide that information to the United Nations, and how the United Nations must maintain the information.³⁸

4. The 1984 Moon Agreement

While not signed by the United States, the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (“Moon Agreement”) was entered into force July 11, 1984.³⁹ The Moon Agreement greatly expands the Outer Space Treaty’s provisions on the peaceful use of the moon and other celestial bodies.⁴⁰ It declares that these bodies should be used only for peaceful purposes, with no nuclear weapons, weapons of mass destruction, or military bases placed on or in orbit around the bodies.⁴¹

C. Other United Nation Agreements Concerning Outer Space

There are eleven other United Nations agreements concerning outer space, including the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and Under Water.⁴² Only the Treaty Banning Nuclear Weapon Tests is particularly related to the Outer Space Treaty since it is the only agreement to explicitly limit warfare in space. The other ten agreements concern satellites and communications with satellites, specify peaceful interactions, and are not as concerned with the military as they are with unhindered communication and preventing spying.⁴³

36. *See id.* art. IV, V, 28 U.S.T. at 699–700.

37. *See id.*

38. *See id.* art. II–V, 28 U.S.T. at 698–700.

39. *See* G.A. Res. 34/68-E, Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Dec. 5, 1979).

40. *See id.* art. 3.

41. *See id.*

42. *See* Status of International Agreements, *supra* note 8; Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water, October 10, 1963, 14 U.S.T. 1313.

43. *See* Status of International Agreements, *supra* note 8. The other ten treaties are: Convention Relating to the Distribution of Programme-Carrying Signals Transmitted by Satellite; Agreement Relating to the International Telecommunications Satellite Organization; Agreement on the

II. United States Space Law Today

United States space law mainly relies on international agreements and framing by presidential space policies, which provide guidance for government activities concerning space. The most recent complete space policy was created in 2010 under former President Obama, about a year after he took office.⁴⁴ President Trump began enacting his own Space Policy Directives, starting at the end of 2017, the fourth of which is Space Force.⁴⁵

The international agreements governing the United States include only those agreements that the United States actually ratified. The United States has ratified the Outer Space Treaty and all its extensions except the Moon Agreement.⁴⁶ Of the eleven other United Nations agreements regarding space, the United States has ratified only five as of January 1, 2019.⁴⁷ The five other ratified agreements include the Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space, and under Water and four satellite and communication agreements.⁴⁸

Former President Obama issued the National Space Policy (“Policy”) on June 28, 2010.⁴⁹ The ten page Policy focuses on declaring the authority of the United States to protect its interests in space and the interests of its allies.⁵⁰ The language of the Policy is exclusively centered around the “inherent right of self-defense” and the defense of allies.⁵¹ There is no inherently aggressive language.⁵²

Furthermore, the Policy advocates the principles of cooperation and

Establishment of the INTERSPUTNIK International System and Organization of Space Communications; Convention for the Establishment of a European Space Agency; Agreement of the Arab Corporation for Space Communications; Agreement on Cooperation in the Exploration and Use of Outer Space for Peaceful Purposes; Convention on the International Mobile Satellite Organization; Convention Establishing the European Telecommunications Satellite Organization; Convention for the Establishment of a European Organization for the Exploitation of Meteorological Satellites; and International Telecommunication Constitution and Convention.

44. See EXEC. OFFICE OF THE PRESIDENT, NATIONAL SPACE POLICY OF THE UNITED STATES (2010), https://history.nasa.gov/national_space_policy_6-28-10.pdf [<https://perma.cc/9KFN-BTA4>].

45. See Wall, *supra* note 4.

46. See Status of International Agreements, *supra* note 8, at 9.

47. See *id.*

48. See *id.*

49. See NATIONAL SPACE POLICY OF THE UNITED STATES, *supra* note 44.

50. See *id.* at 3.

51. See *id.*

52. See *id.*

transparency.⁵³ It provides that preventing “mistrust” is a “shared interest of all nations,” and operations in space should “emphasize openness and transparency” for the public and others for “the benefits provided by the use of space.”⁵⁴

A. President Trump’s First Three Space Policy Directives

1. Space Policy Directive 1: Reinigorating the Human Space Exploration Program

Space Policy Directive 1 (“SPD-1”) is particularly short, only amending one paragraph of the 2010 Policy to provide simply that NASA should lead a program involving both commercial and international partners with the goal to take people to the moon and, ultimately, to Mars.⁵⁵ The Directive specifically stresses “long-term exploration and utilization” of both celestial bodies and provides that implementing the Directive will remain “consistent with applicable law.”⁵⁶

2. Space Policy Directive 2: Streamlining Regulations on Commercial Space Use

Space Policy Directive 2 (“SPD-2”) has seven sections redirecting government agencies that regulate the commercial space sector mostly by reducing regulations, which is generally consistent with all of President Trump’s agendas.⁵⁷ SPD-2 states that changes in regulations should “promote economic growth; minimize uncertainty for taxpayers, investors, and private industry; protect national security, public-safety, and foreign policy interests; and encourage American leadership in space commerce.”⁵⁸

More specifically, SPD-2 calls for a single license for all commercial launches and reentries and directs the changing of licensing requirements to performance-based criteria, rather than prescriptive criteria.⁵⁹ However, it

53. *See id.*

54. *See id.*

55. *See* Reinigorating America’s Human Space Exploration Program, 82 Fed. Reg. 59,501, 59,501 (Dec. 11, 2017); *see also* National Space Policy of the United States, *supra* note 44.

56. *See* Reinigorating America’s Human Space Exploration Program, 82 Fed. Reg. 59,501, 59,501.

57. *See* Streamlining Regulations on Commercial Use of Space, 83 Fed. Reg. 24,901 (May 30, 2018).

58. *See id.* § 1, 83 Fed. Reg. at 24,901.

59. *See id.* § 2, 83 Fed. Reg. at 24,901. Generally, a performance-based criterion is dependent upon a test where the materials/objects must meet a base threshold of, for example, heat resistance

does not state what these requirements must be or how they may be met.⁶⁰

SPD-2 also requires revising current regulation to support increasing commercial, remote sensing from space.⁶¹ Like SPD-1, SPD-2 states that implementing the Directive will remain “consistent with applicable law.”⁶²

3. Space Policy Directive 3: National Space Traffic Management Policy

Space Policy Directive 3 (“SPD-3”) also has seven sections focusing on the regulation of “space situational awareness (SSA)” and “space traffic management (STM).”⁶³ SSA involves tracking space objects, especially around Earth, whereas STM involves coordinating to “enhance the safety, stability, and sustainability of operations” in space.⁶⁴ SPD-3 states that both SSA and STM should be enhanced by advances in technology (likely by increasing the capacity to sense for space debris), increased government support (likely through lenient policies and financial support), development of best practices, and improving the registration of orbiting objects.⁶⁵

SPD-3 provides further guidelines for increasing cooperation and coordination to prevent collisions.⁶⁶ It also delegates roles and responsibilities to different regulating agencies, especially the Departments of Commerce and Defense.⁶⁷ In sum, SPD-3’s goal is to make eventual space travel easier and safer for United States commerce by mapping space debris and space travelers.

III. Space Policy Directive 4: Establishment of the United States Space Force

Space Force sounds like the newest Star Trek remake, (similar to episodes named “Operation-Annihilate!” and “A Private Little War”), but it is

in order to comply with regulations. A prescriptive criterion is method based. This simply means that if the builder has followed the regulation building method, then the regulation is met. A performance-based criterion allows for greater diversity in how creators can meet regulations.

60. *See id.*

61. *See id.* § 3, 83 Fed. Reg. at 24,901–02

62. *See id.* § 7, 83 Fed. Reg. at 24,902.

63. *See* National Space Traffic Management Policy, 83 Fed. Reg. 28, 969 (June 18, 2018).

64. *See id.* §§ 1–2, 83 Fed. Reg. at 28,970.

65. *See id.* § 4, 83 Fed. Reg. at 28,970–71.

66. *See id.* § 5, 83 Fed. Reg. at 28,971–73.

67. *See id.* § 6, 83 Fed. Reg. at 28,973–74.

far from as benign. Its imperialist notes strike more similarity with the Sith⁶⁸ than any interplanetary science coalition.⁶⁹ While Space Force requires Congressional approval, such approval could have dire economic⁷⁰ and legal consequences. Whether boldly or foolishly, if enacted, SPD-4 will go where no Directive has gone before.

A. What Is Space Force?

While SPD-4 outlines the goals of this new Space Force, it fails to answer many other questions. These questions center around the cost, some basic definitions of terms, and how this new branch of the military is going to abide by international laws.

1. The Known

SPD-4 is a surreal read for those who grew up with Star Trek and continual, although perhaps naive, anti-war culture. The first line reads: “Space is integral to our way of life, our national security, and modern warfare.”⁷¹ Up until those last two words, it sounds fairly reasonable, but space has, for the most part, not been used for warfare, and whatever future Americans imagine, space warfare should not be integral to it.

The introduction speaks of adapting United States policy, doctrine, and capabilities “to deter aggression and protect our interests.”⁷² The Department of Defense will be responsible for proposing a sixth branch of the United States Armed Forces called the United States Space Force—a subdivision of the Air Force.⁷³ Space Force would organize a military force capable of ensuring the United States’ full freedom to operate in space and provide a

68. The “Sith” are the “super villains” of the Star Wars franchise. They aim to control the universe and stop free thought through military power.

69. The mission of the main characters of the Star Trek franchise is enshrined in the opening sequence: “Space: the final frontier. These are the voyages of the starship *Enterprise*. Its five-year mission: to explore strange new worlds. To seek out new life and new civilizations. To boldly go where no man has gone before!” They abhor violence and see space as a place of discovery and wonder.

70. See Northman & Snyder, *supra* note 14.

71. See Establishment of the United States Space Force, *supra* note 1, § 1, 84 Fed. Reg. at 6049.

72. See *id.*

73. See *id.*

coalition force in peacetime and “across the spectrum of conflict.”⁷⁴ The directive goes on to define and restate the purpose of such a force.⁷⁵

While this memorandum loosely sketches out the operation plan for a new military branch, only Congress can ratify that new branch.⁷⁶ “If Congress assents, the branch would be the first added to the United States military since 1947, when the Air Force was founded.”⁷⁷ It is questionable whether such a military force is even required when international space law’s governing body has been grounded in enforcing peace and open access.⁷⁸

The only clear goal of SPD-4 is the creation of this new military branch. The rest of the directive is less clearly defined.

2. The Unknown

a. The Cost

Perhaps the most obvious and concerning questions from this directive that every taxpayer should ask, though not as legally relevant, is: How much is Space Force going to cost, and who is going to pay for it? The United States’ national debt has already exceeded twenty-two trillion dollars, and the annual military budget is roughly 989 billion dollars.⁷⁹

In the Air Force’s latest budget, not including Space Force, the Air Force already increased space spending by seven billion dollars for the next five years, bringing the total to nearly fifty billion dollars annually.⁸⁰ SPD-4 only requires that the Secretary of Defense submit a proposed budget for the 2020 fiscal year.⁸¹ The Defense Department’s proposal submitted on March

74. *See id.*

75. *See id.* §§ 2–3, 84 Fed. Reg. at 6049–50.

76. *See* Greshko, *supra* note 11.

77. *Id.*

78. *See* Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9.

79. *See* Bill Chappell, *U.S. National Debt Hits Record \$22 Trillion*, NAT’L PUB. RADIO (Feb. 13, 2019), <https://www.npr.org/2019/02/13/694199256/u-s-national-debt-hits-22-trillion-a-new-record-thats-predicted-to-fall> [<https://perma.cc/NL54-QQLD>]; *see also* Kimberly Amadeo, *US Federal Budget Breakdown*, BALANCE (Mar. 25, 2019), <https://www.thebalance.com/u-s-federal-budget-breakdown-3305789> [<https://perma.cc/8M2T-46LV>].

80. *See* Shreeshan Venkatesh, *‘The Talk of Space Wars, Colonization is Still in the Realm of Fiction,’ DOWN TO EARTH* (Aug. 4, 2018), <https://www.downtoearth.org.in/news/science-and-technology/-the-talk-of-space-wars-colonisation-is-still-in-the-realm-of-fiction—61176> [<https://perma.cc/DX92-3E3A>].

81. *See* Establishment of the United States Space Force, *supra* note 1, § 5, 84 Fed. Reg. at 6050.

1, 2019 suggests an additional 500 million dollars per year be dedicated to Space Force, not including wartime spending.⁸²

With the threat of global warming looming over the Earth, adding another military branch rather than some environmental taskforce seems to jump the intergalactic gun because it assumes that humanity will survive long enough to have wars in space. However, if Congress decides that this is a reasonable proposal, the legal questions start in section three of SPD-4, the statement of what Space Force should be able to do.⁸³

b. Responsible Actors and Military in Space

One goal of Space Force is to protect the peaceful use of space for all “responsible actors,” and all actions should be consistent with applicable laws, including international law.⁸⁴

First, who is a responsible actor? Second, how can any military force in space abide by international law?

Perhaps the answer to the first question is just: Anyone who is not some form of a space pirate. However, the United States has a long history of policing other nations using military power,⁸⁵ and if the United States is the only one deciding who is and is not a responsible actor, this trend will likely continue into space.

The answer to the second question is not nearly as clear-cut. International law is still mainly governed by the Outer Space Treaty.⁸⁶ The Outer Space Treaty’s whole mission is the *peaceful* use of space.⁸⁷ The creation of a military Space Force itself seems to violate the Outer Space Treaty’s whole purpose. The consequences of such violations could include general non-assistance by the international community for the violators and international cooperation against the violators.⁸⁸ “In addition to motivating reciprocal action by other states, a US Space Force would almost certainly endanger the peaceful use of space status quo enshrined in The Outer Space Treaty.”⁸⁹

82. See Northman & Snyder, *supra* note 14.

83. See Establishment of the United States Space Force, *supra* note 1, § 3, 84 Fed. Reg. at 6049–50.

84. *Id.*

85. See JAMES W. LOEWEN, *Chapter Title*, in LIES MY TEACHER TOLD ME: EVERYTHING YOUR AMERICAN HISTORY TEXTBOOK GOT WRONG, PIN (Diane Wachtell ed., 2d ed. 2007).

86. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9.

87. See *id.* at 6050.

88. See *id.* art. III, VI, IX, 18 U.S.T. at 2413–17.

89. Irish, *supra* note 14.

The rest of international space law also enshrines peace and cooperation, and while the other treaties do not make a Space Force illegal *per se*, their obligations do create comical, if not conflicting, results.

The Liability Convention creates strict liability for damage caused by any country's launched space object.⁹⁰ The definition of a launched "space object" is any object a State has launched from the Earth's surface and includes "component parts of a space object as well as its launch vehicle."⁹¹

One comical result from this is, if this new Space Force decides to space battle an actor that is not being responsible, perhaps an "irresponsible actor," using "component parts of a space object," the United States will be held liable for the damages created, if at fault.⁹² As long as the United States pays for the damages it causes, there is no conflict of law.

The Rescue Agreement requires that States "take all possible steps to rescue" astronauts in distress that have landed within the State's territory.⁹³ The definition of an astronaut includes "the personnel of a spacecraft."⁹⁴ As noted above, if these "irresponsible actors" are aboard a spacecraft and Space Force damages that spacecraft to the extent that the personnel require aid, the United States is technically obligated to do everything possible to aid them.⁹⁵ Again, as long as the United States aids those astronauts, then there is no conflict of law.

The Moon Agreement declares that military bases cannot be set up on, or in orbit of, any celestial body.⁹⁶ However, the United States never ratified the Moon Agreement and is only bound by the Outer Space Treaty's Article IV, which declares no military bases may be setup on any celestial body.⁹⁷ Accordingly, Space Force can likely orbit the moon or Earth with a military base without violating any international law it has ratified. The Outer Space Treaty also only covers natural celestial bodies, not man-made ones, so Space Force could simply build a Death Star to be on the safe side of the law.⁹⁸

90. See Convention on International Liability for Damage Caused by Space Objects, *supra* note 10, art. IV, 24 U.S.T. at 2393.

91. See *id.* art. I, 24 U.S.T. at 2392.

92. See *id.* art. I–III, 24 U.S.T. at 2392.

93. See Agreement on the Rescue of Astronauts *supra* note 10, art. II, 19 U.S.T. at 7673.

94. See *id.* art. I, 19 U.S.T. at 7573.

95. See *id.*

96. See Agreement Governing the Activities of States on the Moon and Other Celestial Bodies, *supra* note 39, art. 3.

97. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9, art. IV, 18 U.S.T. at 2413.

98. See Anderson, *supra* note 14.

So, besides the Outer Space Treaty's overall stance that space should be used for peace, this section does not violate any treaty the United States has signed, so long as the United States pays for all damages Space Force causes and rescues all spacecraft personnel. Whether or not a military Space Force can actually abide by the Outer Space Treaty will be determined by how the Space Force is actually used.

However, there is another way to make SPD-4 legal. Abigail Pershing explains the phenomenon in the context of the Outer Space Treaty's Non-Appropriation Principle.⁹⁹ The Principle stated how no part of outer space was to be claimed for any government, but Pershing explains how the Principle has been watered down through years of enacting legal exceptions: "[A] general and consistent State practice that is . . . widely accepted as law (*opinio juris*) . . . constitute[s] the basis for determining whether customary international law exists."¹⁰⁰ Put simply, every other nation on Earth just has to not sue the United States for the actions defined in SPD-4 to become legal.

The more States that sign on to such a military force and the longer such a force goes unquestioned, the more likely laws will morph to allow military forces in space.

c. Economic Gain in Space

Space Force should ensure "unfettered" access for the United States economy and national security, as well as for United States allies.¹⁰¹

Article II of the Outer Space Treaty states that no country has the right to own any celestial body in space.¹⁰² This includes asteroids and their subsequent mining.

However, nations have shifted away from the Outer Space Treaty's original blanket statement and have "carved out an exception to the non-

99. See Abigail D. Pershing, Note, *Interpreting the Outer Space Treaty's Non-Appropriation Principle: Customary International Law from 1967 to Today*, 44 YALE J. INT'L L. 149 (2019) (The non-appropriation principle states that no one has rights to any celestial body, and no one *should* have rights to any celestial body. Pershing explains that the principle is being eroded by States nonetheless taking from those celestial bodies and other States not stopping or opposing them. As this continues, the practice of appropriating these bodies will become commonplace.).

100. See *id.*

101. See Establishment of the United States Space Force, *supra* note 1, § 3, 84 Fed. Reg. at 6049.

102. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9, art. II, 18 U.S.T. at 2413.

appropriation principle, allowing appropriation of extracted space resources.”¹⁰³ Some of these resources would be mined and returned to Earth, while others would be used to refuel ships on long voyages, such as those to Mars.¹⁰⁴

The appropriation of the moon has been ongoing since the first landing. The United States alone has 842 pounds of lunar rock.¹⁰⁵ As mentioned above, this State practice has gone on for so long that it is now effectively legal. Whether this appropriation will continue beyond mere scientific research and reach other planets, such as Mars, is highly likely unless strict laws are written to curb the practice.

As space law continues to develop, national economic gain from space will likely become more legal than it appears now—as States either do not sue each other to enforce the Outer Space Treaty or just pass their own laws to make appropriation fully legal—unless an international shift against appropriation occurs.

d. Military Protection and Projection of Power in Space

Space Force will protect the United States and its allies from hostile acts originating in, and going through, space.¹⁰⁶ Space Force will project “military power in, from, and to space in support of our Nation’s interests.”¹⁰⁷

If Congress ratifies SPD-4, it will not just be the United States’ responsibility, but its obligation to protect allies in space.¹⁰⁸ However, the United States is still bound by the Outer Space Treaty, Liability Convention, and Rescue Agreement. If the United States uses space for non-peace purposes while protecting allies or projecting military power, such as in a space war, the United States will have violated the Outer Space Treaty.¹⁰⁹ If Space Force damages aircraft in flight by using a launched space object while protecting an ally or projecting military power, the United States is strictly liable for that damage, and it may be liable for damage to people and property

103. See Pershing, *supra* note 99, at 158.

104. See *id.* at 150 n.9.

105. See *id.* at 158.

106. See Establishment of the United States Space Force, *supra* note 1, § 3(c), 84 Fed. Reg. at 6050.

107. See *id.* § 3(e), 84 Fed. Reg. at 6050.

108. See Wall, *supra* note 4.

109. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9, art. IV, 18 U.S.T. at 2413.

onboard if it turns out the United States is at fault.¹¹⁰ If Space Force endangers a spacecraft's personnel while protecting an ally or projecting military power, and those personnel end up landing in the United States, then the United States must do everything possible to rescue those astronauts and return them to their launching country.¹¹¹

In essence, all of SPD-4 violates the governing principle behind the Outer Space Treaty. If other nations are willing to look past that, and as long as the United States pays damages and rescues astronauts, Space Force is conceptually legal.

B. Space Force and Repercussions of International Law

1. The Good

Considering SPD-4 was likely spurred by Russia and China's own versions of Space Force,¹¹² it is likely that this memorandum will spur other nations to develop their own, new space-centric organizations or policies.¹¹³ On the positive side, these new organizations or policies may continue to enshrine the ideals of peace, research, and human cooperation. After all, the Outer Space Treaty still controls all signees,¹¹⁴ including the United States, and violations of international law comes with consequences, such as international cooperation to end the violations.¹¹⁵

2. The Bad and the Very Bad

The Outer Space Treaty still controls all signees, including the United States,¹¹⁶ and violations of that treaty could lead to international cooperation

110. See Convention on International Liability for Damage Caused by Space Objects, *supra* note 10, art. I-III, 24 U.S.T. at 2392.

111. See Agreement on the Rescue of Astronauts, *supra* note 10, art. 2-4, 19 U.S.T. at 7573-74.

112. See Wise, *supra* note 13 ("Military leaders have called the creation of a separate space force premature and burdensome. But the president's supporters argue that Russia and China have created separate military arms for their space operations," thereby justifying SPD-4's creation.).

113. See *id.*

114. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9, art. IV, 18 U.S.T. at 2413; see also Status of International Agreements, *supra* note 8.

115. See *Enforcement of International Law*, DIAKONIA, <https://www.diakonia.se/en/IHL/The-Law/International-Law1/Enforcement-of-IL/> [<https://perma.cc/UWR5-7XYQ>].

116. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9; see also Status of International Agreements, *supra* note 8.

against the United States.¹¹⁷ Shots, phasers, and even collisions or pollution from Space Force in orbit may impose liability on the United States should it damage other States' property.¹¹⁸

However, international cooperation against the United States,¹¹⁹ whatever shape that may take, is not the worst outcome. The worst outcome from this directive is the end of the Star Trek dream—space's nearly exclusive role for peace, exploration, and scientific discovery replaced with war. From here on out, countries will increasingly look to space as a place for war and dominance rather than a place to pursue exploration or scientific progress. Should this directive pass Congress (in fact, even if this directive does not pass Congress), upcoming international space laws will likely be militarily themed to combat this new, militarily focused directive because countries must protect their own citizens and prepare for the future, including from space wars that become legal in the future.

President Trump has stated: "It is not enough to merely have an American presence in space. We must have American dominance in space."¹²⁰

Conclusion

International space law has long been, and continues to be, peaceful and cooperative.¹²¹ President Trump's newest Space Policy Directive, calling for a new branch of the military—a Space Force—is a stark deviation from that history. It is uncertain whether such a force can exist without violating the Outer Space Treaty or incurring United States liability from other international treaties and obligations. The laws around space will likely shift to allow this more military-centric position as other nations move to protect themselves and follow the United States' lead. However, this can potentially be avoided if Congress denies the directive or nations hold the United States to the treaties it previously signed. The idea of Space Force seems to be one small step forward for a man, and one giant leap backwards for humankind.

117. See *Enforcement of International Law*, *supra* note 115.

118. See Irish, *supra* note 14.

119. See *Enforcement of International Law*, *supra* note 115.

120. See Irish, *supra* note 14.

121. See Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, *supra* note 9, 18 U.S.T. at 2411; see also Convention on International Liability for Damage Caused by Space Objects, *supra* note 10, 24 U.S.T. at 2391.



Figure 1¹²²

Since this Comment was written, Space Force was approved by the House¹²³ and the new Space Force logo was released.¹²⁴ On top of potentially violating international laws as discussed in this Comment, Space Force will likely violate copyright and trademark laws with this new logo. We, the authors, scanned through the USPTO's TESS database of registered trademarks and could not find any design marks for Star Trek. However, this does not rule out the common law rights CBS and Paramount Pictures owns in the logo.¹²⁵ At some point, international law or even Intellectual Property law must take a stand. "The line must be drawn here! This far and no further!"¹²⁶

A special thank you to our friend, Elliot Taylor,¹²⁷ for his support and genius in this supplemental to the Comment.

122. Derek Hawkins, *Trump reveals Space Force logo, and 'Star Trek' fans aren't happy*, WASH. POST (Jan. 25, 2020), <https://www.washingtonpost.com/national-security/2020/01/25/space-force-logo/> [https://perma.cc/MS42-48GQ].

123. Katie Edmondson, *House Passes \$738 Billion Military Bill With Space Force and Parental Leave*, N.Y. TIMES (Dec. 11, 2019), <https://www.nytimes.com/2019/12/11/us/politics/house-ndaa-space-force-leave.html> [https://perma.cc/5PEJ-677F].

124. Hawkins, *supra* note 122.

125. See generally *Fan Films*, CBS ENTERTAINMENT, <https://www.startrek.com/fan-films> [https://perma.cc/A7Y7-4Z5M] ("STAR TREK and related marks are trademarks of CBS Studios Inc.").

126. STAR TREK: FIRST CONTACT (Paramount Pictures, 1996) (Picard says this quote when the Borg, a villainous and highly sophisticated species in Star Trek, attempts to take over the Earth and the known universe.).

127. J.D. Candidate, University of San Francisco School of Law (2021).