Galactic Accessibility: An Introduction to Interplanetary Human Rights Law Through Crip Legal Theory

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The possibilities within the realm of outer space and future space exploration have always been limitless. There has been renewed interest in space over the last decade, largely fueled by the private commercial space sector. As more and more people become interested in space and connected to the space industry, we must take care not to repeat the mistakes of the distant and recent past.

Space should be accessible to all who wish to travel amongst the stars. We should not discriminate or bar individuals from going to space based on race, gender, gender identity or expression, nationality, religion, disability, financial means, or any other characteristic. We should work to build systems that are as inclusive and accessible as possible. That includes allowing folks equitable access to outer space, to their rights in space, and to the benefits of resources found in space.

This Article explores a proposal for interplanetary human rights protections that are rooted in Crip Legal Theory. A "post-realist" disability perspective centered on accessibility provides an opportunity to be as inclusive as possible as humanity continues its journey of space exploration.

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I. INTERPLANETARY HUMAN RIGHTS LAW

This short Article has the goal of being an extremely brief primer on the nascent field of what I will call “Interplanetary Human Rights Law.”

Interplanetary Human Rights Law should be viewed as part of the evolution of the current International Human Rights regime. The developments within international human rights law in the establishment and advancement of dedicated rights for individuals with disabilities, the face of intensified human activities in outer space, elicits questions as to how the developing human rights framework will boost inclusivity and shape humanity’s growing ambitions among the stars. This new interplanetary framework will be explored through a “post-realist” disability perspective centered on accessibility.

A. FROM NATURAL LAW TO LEGAL POSITIVISM

The modern conception of human rights is based on the Universal Declaration of Human Rights (UDHR). However, the general concept of human rights existed long before this document was produced. While it would be an exhibition in presentism to say that ancient cultures developed human rights regimes similar to modern standards, a fair examination shows that the inherent value of humanity was articulated in numerous different ways throughout antiquity. Some of these examples can be seen in religions and early natural law philosophy. Natural law is a natural starting point for the evolution of human rights law, especially when one considers that religious morality usually invokes some kind of natural law.

Natural law has been described as “principles of right and wrong that are independent from and superior to the law enacted by governments.” Human rights as portrayed in natural law philosophy can be seen through Thomas Hobbes’s nineteen precepts of natural law. These precepts are

6. Id. at 40-41.
broad, general rules but offer a glimpse into how natural law had elements of human rights.\footnote{Thomas Hobbes, Leviathan (Karl Schuhmann & G.A. J. Rogers eds., Bloomsbury Publ’g PLC 2006) (1651) (Precept 9 states: “The ninth Law is that every man acknowledge another for his equal by nature.”).}

The “separability” of morality and legality led to legal positivism.\footnote{See id. at 73-74.} The transition to legal positivism after the Reformation and the Enlightenment provided more emphasis on the actual “rules” that govern the law.\footnote{Harold J. Berman, The Origins of Historical Jurisprudence: Coke, Selden, Hale, 103 Yale L.J. 1651, 1651-1738 (1994).} These rules represent what the law actually is, instead of what it ought to be, in an allegedly neutral way.\footnote{Hobbes, supra note 7, at 75.} This positivist paradigm produced the treaties and conventions that have shaped the current human rights regime.\footnote{See Berman, supra note 9, at 1651-1738.} Starting with the Hague Conventions\footnote{The Hague Convention of 1899 and The Hague Convention of 1907 produced over a dozen treaties and several declarations that pertained to the law of war. These conventions show the beginnings of positivist international human rights law, specifically protections against war crimes. Jianming Shen, The Relativity and Historical Perspective of the Golden Age of International Law, 6 Int’l Legal Theory 15, 26 (2000).} at the end of the nineteenth century and continuing through the Geneva Conventions\footnote{The Geneva Conventions of 1949 and Their Additional Protocols, Int’l Comm. Red Cross (Jan. 1, 2014), https://www.icrc.org/en/document/geneva-conventions-1949-additional-protocols [https://perma.cc/EXG7-XVN2].} of the mid-twentieth century, legal positivism shaped the perspective in which the international community developed international human rights law.

This tradition also included other positivist treaties specifically geared towards human rights—these include: the UDHR; the International Covenant on Civil and Political Rights (ICCPR); and the International Covenant on Economic, Social and Cultural Rights (ICESCR).\footnote{G.A. Res. 217 (III) A, Universal Declaration of Human Rights (Dec. 10, 1948); International Covenant on Civil and Political Rights, Dec. 19, 1966, 999 U.N.T.S. 171; International Covenant on Economic, Social and Cultural Rights, Dec. 16, 1966, 993 U.N.T.S. 3.} The basis of the contemporary international human rights law framework can be traced to the
1948 UDHR, a historic document which sought to articulate the fundamental rights and freedoms to which everyone is entitled.15 The intentions behind those who drafted the UDHR exhibited a heightened understanding of the importance of dignity, liberty, equality, and brotherhood as the document’s foundational principles, from which the universal and inherent basis of human rights is founded.16 It was, and continues to be, a simple notion of dignity, outlined by United Nations Secretary-General Ban Ki-moon, which gives rise to equality and respect in the advancement of human rights values and principles, where people who have mental health and psychosocial disabilities deserve to live with the dignity that is integral to a healthy and fulfilling life.17

B. REALISM AND POST-REALISM

It can be argued that the evolution of international human rights law did not end in the positivist paradigm. The American legal realism that arose in the second half of the twentieth century called into question the alleged neutrality of the positivist paradigm. American legal realism has been dismissed and “caricatured as reducing law to what the judge ate for breakfast” by some critics.18 However, it provides a solid window into how power structures and judges in positions of power shape the law and the way the law is applied. This kind of critique of the power dynamics that shape the law has helped shine light on some of the more marginalized. International human rights law has also been shaped by this evolution of thought. There are three major international human rights instruments that can be viewed as existing in a realist or post-realism paradigm: (1) Critical Race Theory is reflected by the International Convention on the Elimination of All Forms of Racial Discrimination (ICERD);19 (2) Feminist Legal Theory is reflected by the Convention on the Elimination of All Forms of Dis-

crimination Against Women (CEDAW); and (3) Disability or “Crip” Legal Theory is reflected by the Convention on the Rights of Persons with Disabilities (CRPD).

II. CRIP LEGAL THEORY

Crip Legal Theory is important in the context of this Article because of the accessibility lens it provides. Crip Legal Theory is centered on the experience of disabled individuals and how they interact with legal systems. Crip Legal Theory is a unifying theory in that disability affects people of all races and genders. This means that Crip Legal Theory incorporates elements of Critical Race Theory and Feminist Legal Theory. Crip Legal Theory should be the post-realism paradigm in which interplanetary human rights is developed because disability affects individuals from every demographic—it is universal. “Disability” carries a different meaning depending on the individual. There are several definitions for the terms “disabled” and “disability.” There are also several constructions, or models, of disability. Mary Ann Jackson has recently identified six models of disability. These models are: The Charity Model, the Medical Model, the Social

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21. “Crip Legal Theory” is part of the larger methodology of “Critical Disability Theory,” or “Critical Disability Studies” (CDS). CDS looks to “analyze disability as a cultural, historical, relative, social, and political phenomenon” by “scrutinizing” the “social norms that define particular attributes as impairments [and] the social conditions that concentrate stigmatized attributes in particular populations.” Melinda Hall, Critical Disability Theory, STAN. ENCYC. PHIL. (2019).


24. Id. at 77-102.

25. See id.


Model, the Relational Model, the Diversity Model, and the Human Rights Model.

A. MODELS OF DISABILITY

The Charity Model of Disability has also been described as the Moral Model and the Religious Model. These religious and moral features are most associated with the natural law paradigm discussed above. This approach to disability is based on a paternalistic view of the disabled—a view in which disabled people require caretaking and protection, often in the form of forced segregation into asylums and other institutions. Society has mostly transitioned away from the Charity Model, but the centering of abled-bodied individuals is a lasting consequence of this model that still has lingering effects to this day.

The Medical Model of Disability is a biomedical perception of disability. This model is normative in that it classifies disability in “levels of deviance or deficiency.” The normative and allegedly impartial nature of this model of disability is most closely associated with the positivist paradigm that has been discussed in this Article. The Medical Model views disability as inherently decreasing a person’s quality of life and looks to medical intervention as a way to diagnose, cure, and/or rehabilitate people with disabilities. This model is similar to the Charity Model in terms of paternalism and the resulting institutionalism of disabled folks. Again, society is centered around abled individuals.

The Social Model of Disability emerged out of disability rights movements. This model views disability as a construct that “arises from barriers within an oppressive and discriminating society rather than impairment.” In the context of this definition, disability is “the disadvantage or restriction of activity caused by a society which takes little or no account

28. There are other models of disability that have been developed within disability theory. One example is the Affirmation Model of Disability, which Haley Moss describes as “the most encompassing model of disability” because it “criticizes the tragedy base of the Medical Model of Disability, while also emphasizing the power of positive disabled identity that is missed within the Social Model of disability.” HALEY MOSS, GREAT MINDS THINK DIFFERENTLY: NEURODIVERSITY FOR LAWYERS AND OTHER PROFESSIONALS 12 (2021).
29. Jackson, supra note 27, at 3.
30. Id. at 2-3.
31. See id.
33. Jackson, supra note 27, at 3.
34. Id. at 4.
35. Id.
36. Id. at 5.
of people who have impairments and thus excludes them from mainstream activity\textsuperscript{37} and impairment is

a characteristic, feature or attribute within an individual which is long term and may, or may not, be the result of disease, genetics or injury and may: 1) Affect that individual’s appearance in a way which is not acceptable to society, And/or 2) Affect the function of that individual’s mind or body, either because of or regardless of society, And/or 3) Cause pain, fatigue, affect communication, and reduce consciousness.\textsuperscript{38}

The Social Model is a direct response to the Medical Model: the Social Model focuses on limitations to access created by society rather than looking to cure or rehabilitate the individual as in the Medical Model.\textsuperscript{39} The relationship between the Social Model and its predecessors, the Charity Model and Medical Model, mirrors the relationship between realism and its predecessors of natural law and legal positivism. While the Social Model is an improvement on the Charity and Medical Models, it is not without its own flaws. The Social Model has helped to reshape the conversation about disability; however, it has not yet brought tangible changes in the lived reality of many people with disabilities.

The Relational Model of Disability grew out of 1960s Nordic social theory.\textsuperscript{40} It is conceptualized as having three main tenets: (1) disability is a person-environment mismatch, (2) disability is situational and contextual, and (3) disability is relative.\textsuperscript{41} The Relational Model creates space for a more nuanced dialogue about accessibility. In the Nordic countries where the Relational Model is the default view of disability, universal design\textsuperscript{42} has

\textsuperscript{37} “Therefore disability, like racism or sexism, is discrimination and social oppression.” Pam Thomas, Lorraine Gradwell & Natalie Markham, \textit{Defining Impairment within the Social Model of Disability}, GMDP’S COAL. MAG., July 1997, at 2.

\textsuperscript{38} \textit{Id.} (“This covers people with learning difficulties, physical impairments, sensory impairments, facial disfigurement, speech impairment, mental illness, mental distress. Impairment neither causes, nor justifies disability; however only people with impairments are subject disability; they may also experience other forms of oppression simultaneously. Disabled people are those people with impairments who are disabled by society.”).

\textsuperscript{39} Jackson, \textit{supra} note 27, at 4.

\textsuperscript{40} \textit{Id.} at 5.

\textsuperscript{41} \textit{Id.}

\textsuperscript{42} “Universal design,” as defined by the United Nations Convention on the Rights of Persons with Disabilities, means “the design of products, environments, [programs] and services to be usable by all people, to the greatest extent possible, without the need for adap-
become firmly entrenched in general policy. The Relational Model can be viewed as a kind of “post-social” interpretation of disability.

The Diversity Model of Disability, often referred to as a “Universalist” approach, views disability as a variation that societal systems have to respond to when faced. The “Universalist” moniker denotes the idea that disability is not a minority condition, but rather “a universal human phenomenon.” The Diversity Model also makes sure to explicitly recognize the incredible amount of diversity within the disability community instead of treating disability as a monolith identity. The Diversity Model uses an ability-disability continuum and rejects the false dichotomy of abled/disabled. Similar to the Social and Relational Models of Disability, the Diversity Model can also be viewed as part of the post-social paradigm.

B. HUMAN RIGHTS MODEL OF DISABILITY

The Human Rights Model of Disability has developed mostly out of the international instruments mentioned above. The origins of the Human Rights Model can be traced to the adoption of the UDHR in 1948. The universal application, or at least the desire for universal applicability, of the UDHR, especially Article 25, emphasizes how everyone has the right to a standard of living adequate for the health and well-being of themselves and their family and a right to socioeconomic security in the event of sickness or disability. The article represents the sole instance within which the word “disability” is mentioned in the UDHR and supports the intent of the document that everyone is entitled to the rights and freedoms set forth therein, without distinction of any kind. The rights of individuals with disabilities have also been grounded within the human rights framework under the United Nations’ Charter (UNC). Article 55 of the UNC alludes to the equal treatment of persons with disabilities in its declaration that it is the objective of the United Nations and its members to promote universal respect for human rights and fundamental freedoms for all without distinction or specialized design.” Convention on the Rights of Persons with Disabilities art. 2, Dec. 13, 2006, 2515 U.N.T.S. 3.

43. “Post-social” in this context is a direct analogy to post-realist legal jurisprudence. It is not meant to infer that society has moved on from socialization.
44. Jackson, supra note 27, at 6.
45. See id.
46. Id.
47. Id.
49. See id.
50. See U.N. Charter.
tion, irrespective of race, sex, language, or religion. These two documents highlight how the full participation through universal accessibility of persons with disabilities serves to benefit society as a whole. The individual contributions of disabled folks enrich every aspect of life.

The movement culminated with the adoption of the CRPD in 2006. Acknowledging the period between the UDHR in 1948 and the CRPD in 2006, the question arises as to why there has been such a prolonged period for disabled people to be acknowledged and protected within society, when compared to parallel social movements for racial and gender equality—the ICERD and CEDAW were both adopted decades before the CRPD. Considering the broader global movement for disability rights within the context of human rights, the international community was far too slow in its adoption of dedicated human rights conventions for those living with disabilities in the years following the founding of the UN.

The 1971 Declaration on the Right of Mentally Retarded Persons (DRMRP) provided a foundational framework for the protection of rights through national and international action. The declaration affirmed that persons living with intellectual disabilities had, to the degree feasible, the same rights as others—including a right to proper medical care and education, economic security, to a qualified guardian, to protection from exploitation, and to access to legal procedures. In doing so, the declaration paved the way for a future set of comprehensive principles, which would consider the wider needs and rights of those living with disabilities and continues to provide qualified support for institutional accommodation for persons with disability under Article 4. This declaration shows that, even in 1971, the international community was still using a Charity Model of Disability. The title of the declaration shows that the disability rights movement had not yet made clear that the proper term is developmental disability.
This was followed in 1975 by the UN General Assembly’s adoption of the Declaration on the Rights of Persons with Disabilities (DRPD), encouraging the international protection of the rights of persons with disabilities. The declaration describes disabled persons as those who are “unable to ensure by himself or herself, wholly or partly, the necessities of a normal individual and/or social life, as a result of deficiency, either congenital or not, in his or her physical or mental capabilities.” Broader than the 1971 declaration, the DRPD established the broader recognition that those with disabilities of any nature were entitled to the just and acceptable political and civil rights as others, in accounting for the conditions and limitations imposed by their disabilities, including measures necessary to support self-sufficiency. Additionally, the declaration reiterated the rights of persons with disabilities to education, medical services, and placement service—incorporating a personal deficiency-based conceptualization of disability under Article 1. This document, while still paternalistic in many ways, shows the international community transitioning to a Medical Model of Disability.

These declarations are not hard international law. They are extensions of soft international law; the declarations express the will, intention, and opinion of the international community. However, more action from the international community would be required to uphold the human rights of individuals with disabilities, specifically. These declarations resulted in the UN General Assembly’s decision to declare 1981 the International Year of Disabled Persons.

The UN General Assembly later declared that 1983 through 1992 would be the United Nations Decade of Disabled Persons. The resolution was enacted “to provide a time frame during which Governments and organizations could implement activities recommended in the World Pro-

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60. See id.
61. See id.
64. Id.
gram of Action.” Consequently, this period gave rise to further advancements in the international disability movement. Firstly, in 1989, the UN General Assembly adopted the Tallinn Guidelines for Action on Human Resources Development in the Field of Disability, providing a framework to promote the “participation, training, and employment of persons with disabilities within all government ministries . . . in order to equalize opportunities for persons with disabilities.” Secondly, “[i]n 1991, the [UN] General Assembly adopted the Principles for the Protection of Persons with Mental Illness and for the Improvement of Mental Health Care.” The twenty-five principles outlined herein sought to support the rights of mentally disabled persons in healthcare and built upon the achievements of the 1971 DRMRP in its definition of the fundamental freedoms and basic rights concerning persons with mental illness.

Almost sixty years after the UDHR ushered in the modern human rights regime, the CRPD was adopted in 2006, and subsequently entered into force in 2008. The document stands as a paradigm shift from the traditional Charity and Medical Models of Disability to a Human Rights Model that incorporates elements from social, diverse, and relational models of disability. Its articles offer sufficient standards of protection in relation to the civil, cultural, political, and socio-economic rights of persons with disabilities on the basis of inclusion, equality, and non-discrimination.

The CRPD serves to clarify and qualify how all categories of rights apply to persons with disabilities and identifies areas where obstacles may arise to those with disabilities—including physical access to buildings, roads, transportation, and access to information through written and electronic communications. In doing so, it calls for the appropriate instituting of adaptations for persons with disabilities to effectively exercise their rights.

68. Id.; See G.A. Res. 44/70 (Dec. 8, 1989).
69. See G.A. Res. 61/60 (Jan. 24, 2007).
70. Why is the Convention on the Rights of Persons with Disabilities Important?, WORLD HEALTH ORG. (Dec. 1, 2020), https://www.who.int/news-room/q-a-detail/why-is-the-convention-on-the-rights-of-persons-with-disabilities-important [https://perma.cc/94C6-QSV4] (“Rather than considering disability as an issue of medicine, charity or dependency, the Convention challenges people worldwide to understand disability as a human rights issue. The Convention covers many areas where obstacles can arise, such as physical access to buildings, roads and transportation, and access to information through written and electronic communications. The Convention also aims to reduce stigma and discrimination, which are often reasons why people with disability are excluded from education, employment and health and other services.”).
71. See G.A. Res. 61/106, supra note 52.
Several initiatives taken on by the international community have worked in tandem with the CRPD to form a collective human rights framework for persons with disabilities. First is the Committee on the Rights of Persons with Disabilities, a group of eighteen independent experts who oversee the promotion and implementation of the CRPD.72 Second, the Optional Protocol73 to the CRPD represents a more limited document that sets up an individual complaint procedure.74 The document commits parties to recognize the authority of the Committee on the Rights of Persons with Disabilities to consider complaints from individuals or groups who allege an infringement of their rights covered under the CRPD.75 Third is the Special Rapporteur on the Rights of Persons with Disabilities who possesses the mandate to research violations of the rights of persons with disabilities, recommend how to better promote and protect their rights, and to provide technical assistance to that purpose.76

III. SPACE LAW

As has been shown, the evolution of human rights from natural law to positivist law to realist and post-realist law is mirrored by the evolution within the models of disability. This evolution to a post-realist paradigm of human rights law is inseparable from a Social/Relational/Diversity Model of Disability; the two projects became merged within the current interna-

72. Committee on the Rights of Persons with Disabilities, United Nations Hums. Off. High Comm’r, https://www.ohchr.org/EN/HRBodies/CRPD/Pages/CRPDIndex.aspx [https://perma.cc/J5JQ-P7RN] (“All States parties to the Convention on the Rights of Persons with Disabilities are obliged to submit regular reports to the Committee on how the rights are being implemented. States must report initially within two years of accepting the Convention and thereafter every four years. The Committee examines each report and shall make such suggestions and general recommendations on the report as it may consider appropriate and shall forward these to the State Party concerned.”).


tional human rights law regime via the UDHR, CRPD, and other instruments. The evolution of this “post-realist” disability perspective of human rights should be used as the foundation for the interplanetary human rights regime within the field of space, with the new tradition being centered on the concept of accessibility.

Space law has largely been recognized as a part of, and extension of, international law since the United Nations first considered the need for space law. Even so, space law now occupies its own unique jurisprudence. Space law has developed in a way similar to maritime law and aeronautical law. Each body of law emerged as a response to a changing global environment. Similarly, space law has emerged as humanity begins to operate in extraterrestrial space. Elements from international law, contract law, tort law, and administrative law are all found within the realm of space law. It follows then, that human rights laws can, and should be, incorporated into space law jurisprudence.

A. THE UNITED NATIONS’ COMMITTEE ON PEACEFUL USES OF OUTER SPACE

The main international body that produced some of the first internationally agreed upon documents governing space activity was the United Nations’ Committee on the Peaceful Uses of Outer Space (COPUOS). The United Nations Secretariat also provided support for space related activities through a group, which would become the Office of Outer Space Affairs (UNOOSA). Space law started out with dominant input by the two states who were the primary actors in space activities, the USSR and the United States. This means that early space law documents were essentially bilateral treaties between the two nations; this made it easy to reach consensus on a large number of principles that would become international norms. COPUOS conducted, and still conducts, business by consensus.

78. See id.
79. Id.
81. See Doyle, supra note 77.
82. Id.
83. Id.
84. See id.
B. INTERNATIONAL SPACE LAW INSTRUMENTS

The first space law instrument produced by the United Nations was the 1963 Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of Outer Space. This declaration would form the basis for the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, also known simply as the Outer Space Treaty (OST). In addition to the OST, the United Nations has produced the Convention on Registration of Objects Launched into Outer Space (Registration Convention), the Convention on International Liability for Damage Caused by Space Objects (Liability Convention), the Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space (Rescue Agreement), and the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies (Moon Agreement). These are the main instruments governing space law, but they are not the only ones. There are numerous general assembly resolutions that pertain to the governance of outer space. Unfortunately, none of these instruments explicitly discuss human rights law—although some articles in certain treaties and conventions talk about the inherent humanity of space-goers as envoys of mankind (a nod to ideas rooted in natural law, and title

of a fascinating book by George S. Robinson and Harold M. White, Jr.). Because of this lack of explicit human rights protections, there has been a growing conversation about how space law and human rights law interact.

IV. HUMAN RIGHTS IN OUTER SPACE

As stated in the introduction, this Article looks to develop a new framework for human rights protections in space. It is contended that the development of legal principles and guidelines, by the US and among the diverse members of the international community, surrounding the rights of persons with disabilities will support and advance the developing pace of human activities across outer space. The CRPD defines people with disabilities as those “who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.”

The paragraphs above described the evolution of disability models from paternalistic perspectives to inclusive and accessible models framed around disability as a human rights issue. Disability discrimination can now be viewed from the perspective that people with disabilities face barriers that restrict them from participating in society on an equal basis. The United Nations has documented the recent efforts to close the protection gap and ensure that persons with disabilities enjoy the same standards of equality, rights, and dignity as everyone else. The domain of outer space has been interpreted as the common heritage of all humanity, and disabled advocates have advanced the possibility of making sure this common heritage is inclusive and accessible for astronauts with disabilities.

Acknowledging that there are extensive physiological, policy, and legal challenges inherent with human spaceflight, it is posited that advocating for the human rights of persons with disabilities, specifically the right of accessibility, within the context of interplanetary space law benefits the

93. G.A. Res. 61/106, supra note 52, art. 1.
95. This article is premised on the perspective that persons with disabilities may be better-suited to living and working in the unique environment of outer space - including instances where a person required to use an ostomy bag eases waste management procedures, or where an amputee may be better-suited to working within more confined areas in a microgravity environment. Rose Eveleth, It’s Time to Rethink Who’s Best Suited for Space Travel, WIRED (Jan. 27, 2019, 7:00 AM), https://www.wired.com/story/its-time-to-rethink-whos-best-suited-for-space-travel/ [https://perma.cc/MN64-AUWB].
future of human activities in space—including the development of universal safety standards, improvements to existing equipment and technologies used by astronauts, increasing accessibility to space, and in upholding equality and human dignity across the reaches of outer space.

A. ACCESSIBILITY AND THE RIGHT TO ACCESS

The disability rights movement has been pushing for inclusion of disabled folks through the idea of accessibility.96 Accessibility, in the context of human rights for people with disabilities, can simply be understood as the right of access or the right to access.97 Two of the main laws governing disability protection within the United States are the Rehabilitation Act of 1973 (Rehabilitation Act) and the American with Disabilities Act of 1990 (ADA).98 Both of these Acts provided definitions that were amended after their enactment. The Rehabilitation Act originally defined a “handicapped individual” as: “any individual who (A) has a physical or mental disability which for such individual constitutes or results in a substantial handicap to employment and (B) can reasonably be expected to benefit in terms of employability from vocational rehabilitation services provided pursuant to titles I and III of this Act.”99

This definition was updated in 1974 to contain: “any person who (A) has a physical or mental impairment which substantially limits one or more of such person’s major life activities, (B) has a record of such an impairment, or (C) is regarded as having such an impairment.”100 The ADA originally defined disability as: “(A) a physical or mental impairment that substantially limits one or more of the major life activities of such individual; (B) a record of such an impairment; or (C) being regarded as having such an impairment.”101 The ADA definition was updated to read, in part, as:

96. Dep’t of Economic & Social Affairs, Promoting Inclusion through Social Protection 63-76 (2018).
An individual meets the requirement of ‘being regarded as having such an impairment’ if the individual establishes that he or she has been subjected to an action prohibited under this Act because of an actual or perceived physical or mental impairment whether or not the impairment limits or is perceived to limit a major life activity.\(^{102}\)

The updated definition goes on to say that “The definition of disability in this Act shall be construed in favor of broad coverage of individuals under this Act, to the maximum extent permitted by the terms of this Act”\(^{103}\) and “an impairment that substantially limits one major life activity need not limit other major life activities in order to be considered a disability.”\(^{104}\) These amendments intentionally broadened the protections within the ADA.

It is important to note that these models and definitions of disability extend to individuals with invisible disabilities as well as those who identify as neurodiverse or neurodivergent.\(^{105}\) The National Symposium on Neurodiversity at Syracuse University defines neurodiversity as: “a concept where neurological differences are to be recognized and respected as any other human variation. These differences can include those labeled with Dyspraxia, Dyslexia, Attention Deficit Hyperactivity Disorder, Dyscalculia, Autistic Spectrum, Tourette Syndrome, and others.”\(^{106}\)

The concept of neurodiversity is rooted in the Social and Diversity Models of Disability.\(^{107}\) That is to say, neurodiversity is the belief that disability comes from social barriers that prohibit access to certain individuals rather than cognitive variations that individuals may possess.\(^{108}\) It is important to always include neurodiversity and invisible disabilities in any conversation about disability.

People with disabilities and their allies have continued to advance empowering models of disability; ones that view disability as an aspect of identity that influences the experiences of an individual, rather than some


\(^{103}\) Id.

\(^{104}\) Id. at 3556.

\(^{105}\) The National Symposium on Neurodiversity at Syracuse University, Neurodiversity Symp., https://neurodiversitysymposium.wordpress.com/what-is-neurodiversity/ [https://perma.cc/8RZB-GL8L].

\(^{106}\) Id.


\(^{108}\) See id.
kind of burden. One example of empowered portrayals of people with disabilities is Netflix’s Crip Camp.\textsuperscript{109} This documentary, released in 2020, focuses on a group of teens with disabilities seeking to build a social movement and forge a new path toward greater equality.\textsuperscript{110} The documentary focuses on Camp Jened, a summer camp for disabled kids and teens located in the Catskills region of New York that closed in 1977.\textsuperscript{111} The documentary highlights several major events in the history of disability advocacy, which unfolded as a direct result of the camp’s activities, emphasizes the capacity of people with disabilities to rise above their problems to drive political change, and alludes to the future of the disability movement under the next generation of young leaders.\textsuperscript{112}

Two of the most monumental events in disability advocacy of the last century were highlighted in the documentary—the 504 Sit-in and the Capitol Crawl.\textsuperscript{113} The 504 Sit-in took place in 1977 in San Francisco in response to the federal government’s reluctance to enforce Section 504 of the Rehabilitation Act of 1973 (“the Act” or “Section 504”).\textsuperscript{114} The Act represented one of the first pieces of federal legislation that offered specific protections to those with disabilities in the US.\textsuperscript{115} The language in Section 504 stated, in part, that: “No otherwise qualified individual with a disability in the United States . . . shall, solely by reason of her or his disability, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under any program or activity.”\textsuperscript{116}

In response to the movement, the Health Secretary signed regulations implementing the scope of Section 504 by establishing a three-pronged legal definition of disability as opposed to a medical one, this allowed for judicial enforcement through the courts.\textsuperscript{117} Accordingly, the outcome stood

\begin{itemize}
\item \textsuperscript{109} Jake Coyle, In ‘Crip Camp,’ a Rare Spotlight for Disability Rights, AP NEWS (Mar. 24, 2020), https://apnews.com/a98e882354d75370aceab8717b3e63c [https://perma.cc/TU5Q-UH55].
\item \textsuperscript{110} See id.
\item \textsuperscript{111} Id.
\item \textsuperscript{112} Id.
\item \textsuperscript{113} Id.
\item \textsuperscript{114} The San Francisco federal building sit-in lasted for 26 days. This firsthand account gives a brief history of the event. Kitty Cone, Short History of the 504 Sit In, DISABILITY RTS. EDUC. & DEF. FUND, https://dredf.org/504-sit-in-20th-anniversary/short-history-of-the-504-sit-in [https://perma.cc/4A5B-GSKG].
\item \textsuperscript{116} 29 U.S.C. § 794 (2021).
\item \textsuperscript{117} Id.; See Nancy Hicks, Califano Signs Regulations to Ban Discrimination Against Disabled, N.Y. TIMES (Apr. 29, 1977),
\end{itemize}
as a defining and unifying event for the disability movement, one which brought together people with different disabilities in support of legislation that affected the collective disability population.

The next major event surrounding US disability legislation was the Capitol Crawl.118 This occurred in 1990 as part of the lead up to the signing of the Americans with Disabilities Act of 1990 (ADA).119 The Capitol Crawl saw disability rights advocates climb and crawl up the Capitol building’s front steps as a display of strength and solidarity.120 The event demonstrated the daily struggles faced by people living with disabilities, highlighted the need for accessibility, and drew public attention to legislative delays surrounding the ADA. The significance of a major legislative body being inaccessible to a large group of individuals cannot be understated. Additionally, the ADA represents one of the greatest legislative achievements for the disability rights movement in the United States. The ADA prohibited discrimination against people with disabilities in almost every aspect of public life.121 It also created a legal framework that was designed to ensure that disabled people received equal treatment by eliminating barriers to access—showing that equal rights for disabled people are rooted in accessibility.

The concept of universal access through universal design has already been shown to provide tangible benefits within the context of human spaceflight.122 The contributions of the Gallaudet Eleven advanced the course of scientific knowledge concerning the human body in outer space and highlighted the contributions made to human spaceflight by persons with disabilities.123 These individuals participated in a joint research program from

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120. Id.
121. See Americans with Disabilities Act, 42 U.S.C. §12101 (a)(4)-(b)(4) (describing the everyday barriers that disabled folks face in daily life and stating that the purpose of the ADA is to alleviate those barriers).
122. Ersilia Vaudo, Chief Diversity Officer for the European Space Agency, discussed the “Space and Astronomy Research Accessibility” workshop, which “analysed the links between space and astronomy, inclusion and disability” and “discussed [the] adoption of accessible technology for astronomical research.” UN Office for Outer Space Affairs, Pushing Frontiers: Human Spaceflight and Disability, YouTube, 13:55-23:23, https://www.youtube.com/watch?v=K8NG4jKhPM&t=836s.
123. The Gallaudet Eleven were a group of 11 men aged 25-48 who were recruited from Gallaudet University (known as Gallaudet College during that time) who had become
1958 to 1968 designed by NASA and the US Naval School of Aviation to understand the effects of prolonged weightlessness, motion sickness, and the human body’s adaptation to spaceflight. The contributions of the Gallaudet Eleven highlight how people living with disabilities can rise above their limitations and contribute to human endeavors in space when they are given the opportunity.

The history of the disability rights movement within the United States, including its legislative and social achievements (both past and present), coupled with the United States’ outsized role in the international community and prominence in space activity, make it a leading candidate to push for the inclusion of disability rights within the realm of space law. The development of an interplanetary human rights framework will require the United States, in conjunction with other spacefaring states, to press for greater dignity, equality, and inclusion in the domain of outer space.

B. NAMIBIA ADVISORY OPINION

In relation to the enforcement of human rights principles and values within the international community, its legal basis under international customary law has been settled. This is established by the 1971 Namibia Advisory Opinion, a watershed decision issued by the International Court of Justice (“ICJ”), which established precedent for the extraterritorial application of human rights. In addressing the question of state responsibility, the ICJ decision held that member states are endowed with the obligation to keep intact and preserve the rights of other states and the people in them. Thus, the title of a state over a particular territory is not a prerequisite for the extraterritorial application of human rights law, but the state’s physical


Throughout a decade of various experiments, researchers measured the volunteers’ non-reaction to motion sickness on both a physiological and psychological level, relying on the 11 men to report in detail their sensations and changes in perception. These experiments help to improve understanding of how the body’s sensory systems work when the usual gravitational cues from the inner ear aren’t available.

Id.

124. Id.; See also Deaf Difference + Space Survival Exhibition Video, GALLAUDET UNIV., https://www.gallaudet.edu/museum/ddss-doc/ [https://perma.cc/9BRK-VVWP].


126. See id.
control over said territory is alone sufficient. Accordingly, the cross-domain application of international human rights values and principles into international space law jurisprudence is supported by existing international customary law.

V. INTERNATIONAL LAW AND FUTURE CONDITIONS

The existing international law surrounding human rights lacks specificity in terms of some of the unique situations that can arise from the analysis of human rights in relation to persons with disabilities bears relevance in addressing the myriad of adverse health conditions which may result from human spaceflight activities and can give rise to injuries or diseases that may result in temporary or permanent disability.

In the context of space exploration, pre-existing health conditions and disabilities have led to premature disqualifications of astronaut candidates. The reasoning behind these heightened requirements for candidates is the intensified nature of technical and physical challenges faced by astronauts in the full and proper performance of their duties in space. It is anticipated that such heightened requirements for astronauts and human spaceflight participants will continue into the future. This may also give rise to other forms of discrimination, e.g., socioeconomic discrimination against lower income individuals. The increasing roles of capitalism and commercialization in outer space, a reinforced emphasis on the bottom line, and pursuit of greater returns on investments incentivize the need to exclude the participation of individuals deemed incapable of meeting certain physical and mental requirements. The importance of human rights, including disability rights, in space becomes central when formulating protections for those participating in space activities.

The hazards of spaceflight upon the human body have been well documented, with prolonged human activities in space giving rise to several health concerns amongst returning astronauts—including blood clots,

127. See id.
128. Due to conditions in space, an astronaut has an increased risk of cancer, degenerative diseases, and bone loss, among many other health conditions. The Human Body in Space, NASA (Feb. 2, 2021), https://www.nasa.gov/hrp/bodyinspace [https://perma.cc/23BE-BDZR].
130. Id. at 823-24.
131. Id. at 823.
changes in vision arising from swollen optic nerves, and flattened eye-
balls. Consequently, owing to such health concerns, returning astronaut
Scott Kelly has encountered persisting difficulties in the performance of
once mundane daily tasks. There are a range of hazards associated with
the unique environmental conditions of outer space. Five hazards of human
spaceflight, according to NASA, are: radiation, isolation and confinement,
distance from Earth, lack of gravity, and hostile or closed environments.

The CRPD is intended as a human rights instrument with an explicit
social development dimension. This elicits (but does not “beg”) the ques-
tion as to the role that persons with disabilities will have to play in the on-
going socioeconomic development of outer space. The adoption of uni-
versally designed and specialized safety guidelines rooted in accessibility
would benefit those with disabilities, as well as other spacegoers. For
people with disabilities to reside in outer space and actively participate in
the social, economic, and cultural activities necessary for the full realization
of their potential as human beings, human rights law must develop to rec-
ognize that people with disabilities have the basic rights required in leading
a dignified life. Bridging and developing upon the intersection between
human rights law and space law into a new interplanetary human rights
regime centered on accessibility may be pursued through several means.

The first is the advancement of disability rights in the context of outer
space requires a consideration of the universal and inherent human rights

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nauts on the International Space Station report changes in their vision after they come back. Scans show that the backs of their eyeballs somehow get flattened, their retinas wrinkle, and their optic nerves swell after spending a prolonged period of time in microgravity, causing farsightedness.”).

134. NASA astronaut Scott Kelly gives a firsthand account of the effects of space-
flight once an astronaut returns to Earth. Scott Kelly, *Astronaut Scott Kelly on the Devastat-
ing Effects of a Year in Space*, SYDNEY MORNING HERALD (Oct. 6, 2017, 11:52 AM),
in-space-20170922-gyn9iw.html [https://perma.cc/6YYY-UXGB].

135. Melanie Whiting & Laurie Abadie, *5 Hazards of Human Spaceflight*, NASA,
https://www.nasa.gov/hrp/5-hazards-of-human-spaceflight [https://perma.cc/7AVE-VZK3].


137. *Id.*

values and principles contained under the established right to health. It is through this acknowledgment of the foundational elements offered by the contemporary right to health that precedent may be found between international human rights law and space law, and from which new jurisprudence may be advanced in the intersection between the human rights of those with disabilities and the domain of outer space. The right to health encompasses the right to enjoyment of the highest attainable standard of physical and mental health, seen as an indispensable human right for the exercise of other human rights.139 Its foundations are set within Article 25 of the UDHR, and its scope is detailed under Article 12(1) of the International Covenant on Economic Social and Cultural Rights (ICESCR).140

The next way disability rights may be advanced in space law is by shaping state practice and interpretation surrounding the notion of “safety” under the five foundational space law agreements mentioned above. From a theoretical perspective, a consideration of dedicated human rights for persons with disabilities under space law jurisprudence may be drawn from the OST, the Rescue Agreement, and the Moon Treaty.141 Article V of the OST outlines the duty of state parties to the treaty to immediately inform other states and the UN of any phenomena discovered in outer space which “could constitute a danger to the life or health of astronauts.”142 The article carries a humanitarian element, in placing a positive obligation upon states to share information and protect people involved in the exploration of outer space on behalf of all mankind.143 Article XII of the OST references the concept of safety in outlining that “[a]ll stations, installations, equipment and space vehicles on the moon and other celestial bodies shall be open to representatives of other State Parties . . . “144 — whereupon advanced and reasonable notice must be provided by the lessee state to the lessor, to allow “that maximum precautions may be taken to assure safety and avoid interference with normal operations.”145 The measure of free access detailed herein relates to the question of visits by state representatives of contracting parties to space objects located on celestial bodies — established by a lex specialis where there is no general international law rule giving the right of free access to areas under the quasi-territorial jurisdiction of states in outer espacio.
space. The wording and intent of the article advances its interpretation to be read to mean that there shall be free access at all times to all areas of outer space and celestial bodies, except as provided by Article XII. The duty to undertake maximum precautions in meeting the needs of persons with disabilities has not ascended to international customary law which require state practice and opinio juris. There has never been a practice of accommodating the disability requirements of astronauts in space, and the OST does not create a clear duty to meet such requirements.

VI. CONCLUSION

The lack of explicitly outlined protections for disabled folks within the context of the current space law jurisprudence is disheartening, but also means there is an opportunity to create a new human rights paradigm specifically designed for life in space. Outer space is a realm that can be developed in a way that is inclusive and accessible for everyone. A new interplanetary human rights framework, a combination of the current international human rights regime and incorporates it into the current space law jurisprudence, built upon a post-realist disability perspective focused on universal accessibility should be adopted as part of the continued evolution of human rights. The three novel fundamental rights proposed by the Jus Ad Astra project are the right to water, the right to a breathable atmosphere, and the right to a habitable environment. These three novel fundamental rights can be recognized as elements of other rights in the current international human rights regime, but are not explicitly outlined in terms of human activity in space. These rights should form the basis for the new re-

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146. Cestmir Cepelka et al., The Application of General International Law in Outer Space, 36 J. Air L. & COM. 30, 33 (1970) (“Free access, as provided for by article I, paragraph 2 of the Space Treaty, must be regarded as complementary to the nonappropriative character of the outer space environment. As such, free access cannot be limited to areas of celestial bodies. Where the Treaty provides that ‘there shall be free access to all areas of celestial bodies,’ one can attach no derogative significance to the explicit stipulation. Any derogation of the principle of freedom of outer space would be void.”).

147. See G.A. Res. 2222, supra note 86.


149. See G.A. Res. 2222, supra note 86.

150. JUS AD ASTRA, http://jusadastra.org [https://perma.cc/522F-GZUE] (the Jus Ad Astra project is working to develop an authoritative international treatise that clarifies the fundamental legal principles, including human rights, applicable to current and future human activities in outer space. The project is looking to codify novel and fundamental human rights and lay the foundation to address ongoing debates about human rights in international space law jurisprudence).
regime of interplanetary human rights, because of the unique challenges that accompany human activity in space, that builds off of the current body of international human rights law.

All three of the novel fundamental rights proposed by Jus Ad Astra are intrinsically linked to the accessibility concerns of disabled folks. Scientists, designers, and engineers should constantly ask themselves if the structures they are creating for use in outer space will be accessible to persons with disabilities. Disabled individuals have fought for decades to gain access to places that excluded them for centuries. Unlike most terrestrial structures that have to be retrofitted to become accessible for disabled individuals, the structures currently being designed for operation in space (e.g., space stations, laboratories, and eventually, colonies) can, and should, be accessible from the time of their conception. Society is already working towards disability inclusion and universal accessibility, thanks in large part to the disability rights movement. Crip Legal Theory, a post-realist legal perspective that centers the experience of people with disabilities as they navigate the legal system, has been incorporated into the international human rights regime as seen by the Human Rights Model of Disability.\textsuperscript{151} This modern international human rights regime is the product of an evolution from natural law to a post-realist paradigm. This evolution should continue into a new interplanetary human rights framework that centers accessibility.

\textsuperscript{151} See generally McRuer, \textit{supra} note 23.