

METALAW

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I. INTRODUCTION

A. *THE SPACE AGE—UNITED STATES BEGINNINGS*

When President John F. Kennedy, in his special message to Congress on May 25, 1961, announced a priority of going to the moon, he inaugurated vigorous United States involvement in establishing and promoting the exploration of space.¹ Formulating his goals, he cited the 1957 Sputnik launch and the Soviets' move into space as creating a global contest “between freedom and tyranny.”² He thus enunciated his policy within a construct of mythic proportions.

Kennedy stated the “dramatic achievements in space . . . [and] the impact of this adventure on the minds of men everywhere,” required American preeminence in space as essential to perpetuate freedom.³ Without gaining preeminence and maintaining the “clearly leading role” in space, Kennedy said serious implications existed for those “attempting to make a determination of which road they should take.”⁴ Would it be freedom or tyranny?

Kennedy committed the nation to achieving within a decade the goal of landing a man on the moon and returning him safely to Earth. Space exploration was to be a meta

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¹ John F. Kennedy, *Special Message to the Congress on Urgent National Needs, May 25, 1961* in PUBLIC PAPERS OF THE PRESIDENTS OF THE UNITED STATES: JOHN F. KENNEDY, 1961, at 396 (Washington: Gov't Printing Office 1962).

² *Id.* at 403.

³ *Id.*

⁴ *Id.*

response, a way to transcend traditional ways of exercising power, a way that could offer “the key to our future on earth.”⁵ Kennedy subsequently refined a space policy that would allow further development of the technology and capacity necessary to implement this grand vision. Kennedy’s policy rested on the premise that “[i]f we are to go only half way, or reduce our sights in the face of difficulty . . . it would be better not to go at all.” He said that the United States, in its determination that “freedom shall survive and succeed” held three large advantages: 1) “we are on the side of liberty;” 2) “we are not alone;” and 3) “[a] third asset is our desire for peace.”⁶

Kennedy mobilized the American public to support his vision from the perspective of survival as a free people: “Whatever mankind must undertake, free men must fully share.”⁷ He constructed his vision by invoking the New Frontier and exploration of new worlds under “a banner of freedom,” not a “flag of conquest.”⁸ Through epic construction, Kennedy signified the Space Age using freedom rather than conquest to engage the American people while invoking a “promise of some day providing for even more exciting and ambitious exploration of space, perhaps beyond the moon, perhaps to the very end of the solar system itself.”⁹ Space signified freedom, adventure, and liberation.

⁵ *Id.*

⁶ *Id.* at 404.

⁷ *Id.*

⁸ John F. Kennedy, *Address at Rice University in Houston on the Nation’s Space Effort, (September 12, 1962)* in PUBLIC PAPERS OF THE PRESIDENTS OF THE UNITED STATES, 1963, at 668, 669.

⁹ Kennedy, *supra* note 1, at 404.

Just over fifty years later, we stand today on the precipice of the commercialization of space. Just as we privatized and commercialized cyberspace,¹⁰ we move now into space. We send not only astronaut envoys, but soon space tourists will also venture into the Final Frontier on a routine basis and at reasonable cost.¹¹ Indeed, five states have passed spaceflight activity liability limitation laws to lend protection and

¹⁰ Development of the Internet, the backbone infrastructure of cyberspace, initially began in the Defense Department's Advanced Research Project Agency as the ARPANET project in 1969. The Internet developed as multiple networks sprang up and hooked up to what by the late 1980s became its backbone—the NSFNET. The NSFNET was established by the National Science Foundation to give scientists and researchers access to supercomputers. This was done by connecting the supercomputers to the Defense Department's existing network. In 1984, the Defense Department moved to other technologies to link its military sites, but the NSF still was charged with maintaining a research network. The foundation had only one choice—to create its own network.

The move to privatize this public space began on November 1, 1994, with completion slated for 1995. The government passed the job of building and maintaining the backbone of the information superhighway to four private companies. At stake, however, was more than the \$12 million network that the government built. The high-stakes competition actually included the entire telecommunication market for at least the next century because how the game plays out and who controls it ultimately affects the global structure of the "Information Age." See, e.g., Grant Parsons, *Net Profit*, THE NEWS & OBSERVER, Sept. 1994, at 4E. But the premise was unmistakable—private sector, free market capitalism driven by consumer competition and promoted by federal policy aimed to deregulate and to provide incentive for innovation through various mechanisms like grants and research programs.

Privatization and the commercialization of space now begins. NASA recently shut down the Shuttle program and turned to commercial companies to design and make ships to transport crew and cargo to the International Space Station (ISS). According to the Commercial Crew and Cargo Program Office (C3PO), C3PO's program objectives are to:

- [(1) Implement U[nited] S[tates] Space Exploration policy with investments to stimulate the commercial space industry[;]
- [(2) Facilitate U[nited] S[tates] private industry demonstration of cargo and crew space transportation capabilities with the goal of achieving safe, reliable, cost effective access to low-Earth orbit[;]
- [and (3) Create a market environment in which commercial space transportation services are available to Government and private sector customers.

See NASA, Commercial Crew and Cargo Program Office (C3PO), http://www.nasa.gov/offices/c3po/home/c3po_goal_objectives.html (last visited Oct. 1, 2012). See also in this issue, Julie A. Jiru, *New Space for an Old Goal: Using the Space Act Agreement to (Finally) Enable the Commercial Space Industry*, 1 L.A. COUNTY BAR ASS'N INT'L SECTION INT'L L.J. 1, <http://www.lacba.org/Files/Main%20Folder/Sections/International%20Law/InternationalLawNewsletter/files/JiruArticle.pdf>, for an extended discussion of particular mechanisms NASA now uses to facilitate the commercialization of space.

[On August 3, 2012, NASA announced the award of] new agreements with three American commercial companies to design and develop the next generation of U.S. human spaceflight capabilities, enabling a launch of astronauts from U.S. soil in the next five years. Advances made by these companies under newly signed Space Act Agreements through the agency's Commercial Crew Integrated Capability (CCiCap) initiative are intended to ultimately lead to the availability of commercial human spaceflight services for government and commercial customers.

Press Release, NASA, Release 12-263: NASA Announces Next Steps in Effort to Launch Americans from U.S. Soil (Aug. 2, 2012), http://www.nasa.gov/home/hqnews/2012/aug/HQ_12-263_CCiCAP_Awards.html. The NASA CCiCap partners and awards are: (1) Sierra Nevada Corporation, Louisville, CO, \$212.5 million; (2) Space Exploration Technologies (SpaceX), Hawthorne, CA, \$440 million; and (3) The Boeing Company, Houston, TX, \$460 million. *Id.* See Emi Kolawole, *NASA Awards Multimillion-Dollar Contracts to Boeing, SpaceX, and Sierra Nevada for Human Spaceflight*, WASH. POST, Aug. 3, 2012, http://www.washingtonpost.com/blogs/innovations/post/nasa-awards-multimillion-dollar-contracts-to-boeing-spacex-and-sierra-nevada-for-human-spaceflight/2012/08/03/a40938c0-dd89-11e1-af1d-753c613ff6d8_blog.html.

¹¹ See Matthew Schaefer, SPACE LAW EDUCATION IN THE UNITED STATES IN A NEW ERA OF SPACE, 1 L.A. COUNTY BAR ASS'N INT'L SECTION INT'L L.J. 1, <http://www.lacba.org/Files/Main%20Folder/Sections/International%20Law/InternationalLawNewsletter/files/SchaeferArticle.pdf>, for a discussion of liability surrounding sub-orbital space tourism flights.

incentive to the emerging space industries. These states include California,¹² New Mexico,¹³ Florida,¹⁴ Texas,¹⁵ and Virginia.¹⁶ A fundamental question surrounds our now rapid move to explore and to commercialize space. This question regards the implications that exist as our species moves into outer space to explore, to exploit, and to settle. What consequences confront us as we expand our ecological Earth niche to space?

B. *WE ARE NOT ALONE*

Arthur C. Clarke stood before the British Interplanetary Society in London on October 5, 1946. As its Chairman, he presented what is the first discoverable writing in the English language about selected issues of space law.¹⁷ Attempting to assess the impact upon society of the emerging science of astronautics, Clarke stated:

[I]f our civilization is to have a future, then we must see that it does not repeat its earlier mistakes. One of the most important works an organization . . . can do is to make the world consider seriously the implications of interplanetary travel, so that its advent is not an overwhelming mental shock but something fully anticipated.¹⁸

Robert Freitas, Jr. in his *Metalaw and Interstellar Relations*, comments that the history of human expansion has been a sordid tale of subjugation, colonization, and exploitation. The Europeans were especially notorious in this regard.

Natives of foreign lands were sent back to the Continent to be placed on display as if mere zoo animals—even though they differed in appearance only slightly from the explorers. Our early settlers in this country displaced the Indians similarly, imposing upon them our way of life and our system of government (to a large degree). And the technologically advanced nations weren't the only ones to expand by means of ruthless incursion and expulsion of indigenous races. The Aborigines ran out the

¹² AB-2243 SPACE FLIGHT: SPACE FLIGHT LIABILITY AND IMMUNITY ACT (2011-2012). http://leginfo.legislature.ca.gov/faces/billTextClient.xhtml;jsessionid=2b793781679c0e95d4797388ab8c?bill_id=201120120AB2243.

¹³ Space Flight Informed Consent Act, N.M. STAT. ANN. § 41-14-1 to -4 (West Supp. 2011).

¹⁴ FLA. STAT. ANN. § 331.501 (West Supp. 2012).

¹⁵ Limited Liability for Space Flight Activities, TEX. CIV. PRAC. & REM. CODE ANN. § 100A.001-.004 (Vernon Supp. 2012).

¹⁶ Space Flight Liability and Immunity Act, VA. CODE ANN. § 8.01-227.8-10 (West Supp. 2010).

¹⁷ See STEPHEN E. DOYLE, ORIGINS OF INTERNATIONAL SPACE LAW AND THE INTERNATIONAL INSTITUTE OF SPACE LAW OF THE INTERNATIONAL ASTRONAUTICAL FEDERATION 16 (Univelt 2002).

¹⁸ See *id.* at 15-17.

Tasmanians, the Malays routed the Sakai, the Bantus expelled the Hottentot The tally of human aggression is virtually endless.¹⁹

As we expand into outer space, we must consider seriously the implications of our travel there so we may fully anticipate and prepare accordingly for potential contact and interaction with other sapient forms that we may encounter. If we are “to have a future, then we must see that it does not repeat its earlier mistakes.”²⁰

Metalaw is an emerging juridical science that seeks to discover the basic tenets that can serve as guides to interaction with any intelligent life form in the universe. Because technology advances faster than jurisprudence can generally respond, it is reasonable for the global community to prepare fully for the consequences of scientific disciplines, like the space sciences and space exploration, as these may well alter our traditional legal definitions. We need to be prepared in anticipation of such consequences. Are there universal tenets that apply across all life forms in the universe? If so, what are these tenets that can serve to guide the interactions of different forms of sapiency such that if we make contact with these we shall properly know how to conduct relations?

II. METALAW

In 1963, Andrew G. Haley published his *Space Law and Government*.²¹ Haley, having experience as a founder and first president of Aerojet Engineering Corporation; president of the American Rocket Society and the International Astronautical Federation; and General Counsel of these two latter organizations, was a world authority in technical

¹⁹ Robert A. Freitas, Jr., *Metalaw and Interstellar Relations* (1977), <http://www.rfreitas.com/Astro/MetalawInterstellarRelations.htm>.

²⁰ DOYLE, *supra* note 17, at 16 (quoting Arthur C. Clarke).

²¹ ANDREW G. HALEY, *SPACE LAW AND GOVERNMENT* (Appleton-Century-Crofts 1963)

and legal matters of communications and astronautics.²² In *Space Law and Government*, Haley considered “Metalaw—The Possibility of Other Worlds with Intelligent Life.”²³

Metalaw refers to the study and development of a workable system of laws that can be applied to relations amongst all forms of intelligence, whether human, humankind, or other. Metalaw uses the tools of meta-analysis to derive a metalegal order of universal constants that can be applied above and beyond the local constraints of positivistic, anthropocentric law to all forms of sapient beings in the universe. Towards this end, metalaw seeks to establish a regulatory scheme for outer space that considers the possible existence of other intelligent life and that could be used to help regulate interactions between such possible life forms. Metalaw is an emerging science that focuses on “what ought to be” rather than “what is.”

Acknowledging there are hundreds of millions of potentially habitable planets in the universe, Haley wrote:

The possibility that such forms exist and that sooner or later man may establish contact with them provides the central theme of [the] discussion. Indeed the problem of a “rule of law” governing relations between sapient beings different in kind may first be encountered by man himself on earth.

In metalaw we deal with all frames of existence—with sapient beings different in kind. We must do unto others as they would have done unto them. To treat others as we would desire to be treated might well mean their destruction. We must treat them as they desire to be treated. This is the simply expressed but vastly significant premise of metalaw.²⁴

Reminiscent of Immanuel Kant's metaphysical discussions of almost two centuries earlier in which Kant examined the relation between our reason and sensibility on the one hand and our knowledge of the thing in itself on the other, Haley reformulated the Golden Rule in the language of the rule of metalaw. In what has come to be called Kant's

²² See Stephen E. Doyle, *Space Law and Government*, 37 S. CAL. L. REV. 371 (1963-1964) (reviewing ANDREW G. HALEY, *SPACE LAW AND GOVERNMENT* (1963)).

²³ HALEY, *supra* note 21, at 394-423.

²⁴ *Id.* at 395.

Copernican Revolution in philosophy, Kant developed his theory of reason in relation to the altered perspective given by Copernicus.²⁵ Kant wrote, “Failing of satisfactory progress in explaining the movements of the heavenly bodies on the assumption that they all revolved around the spectator,” Copernicus “tried whether he might not have better success if he made the spectator to revolve and the stars to remain at rest.”²⁶

Haley’s metalaw frames the Golden Rule from a similar perspective. Haley believed “[t]he Golden Rule has no application other than to humans.”²⁷ During the whole of human civilization, “no law-giver has framed the Golden Rule in the language of the rule of metalaw.”²⁸

Anthropocentric law is law from merely one frame of reference. As we move outward to explore and to settle outer space, we consider our Earth as but one celestial body amongst millions, if not billions, of celestial bodies on which sapient life may exist. Haley designed his metalaw explicitly to embrace the juridical relations among all intelligent forms in the universe rather than merely from an anthropocentric perspective.²⁹

Haley recognized the Golden Rule as the basic tenet, or primary principle, in a system of laws created “by man for man.” He understood that a system of law to organize and to regulate humanity’s activities in the universe should be based on immutable, universal principles. Concluding that the Golden Rule is not sufficient to meet the ramifications of the possibility of other worlds, other natures, and other legal systems, Haley was left with the requirement to formulate an alternative approach to the problem of a legal structure that could effectively order and regulate relations between all live forms. Out of these considerations the concept of metalaw grew.

²⁵ Rita Lauria, *Virtuality*, in DISSERTATION ABSTRACTS INTERNATIONAL, 61-07A (Bell & Howell Information and Learning No. 9979464) (2000).

²⁶ IMMANUEL KANT, *CRITIQUE OF PURE REASON*, B, at xvi (Norman Kemp Smith trans, St. Martin’s Press 1929) (1787).

²⁷ HALEY, *supra* note 21, at 395.

²⁸ *Id.*

²⁹ George S. Robinson, *Metalaw—Prolegomena to Quantification of Jus Naturale*, 40 GEO. WASH. L. REV. 709 (1972).

Haley believed that given merely the possibility that other intelligent forms of life exist, humans could not be so arrogant as to proceed into space in total disregard for a guiding standard of conduct, or principle of behavior, that would govern peaceful and harmonious relations between different forms of intelligent life in the universe. He believed that as the advancing science of astronautics provides expanding possibilities and services to humanity, so too would it be the role of lawyers to ensure that political organizations and legal structures keep pace.

Haley understood the new environment of space made possible by advancing science needed a new orientation. The framework of existing terrestrial law, he wrote, “will never suffice in space: analogies, carryovers, carrybacks, and extensions will never fulfill the need.”³⁰ According to Haley and to those who continue to work to discover its basic tenets, metalaw provides a working basis for the universal development of a cosmic law of the space age.³¹

Projecting but one principle of human law to metalaw, Haley named the concept of absolute equity. Stating the natural law of the human is anthropocentric, and therefore can govern in space only among humans, with the concept of absolute equity, we are prepared to meet not only the possibility of an indefinite number of natures, but also an indefinite number of frameworks of natural laws.³²

Ernst Fasan, an Austrian jurist, later elaborated upon Haley’s work on metalaw. In brief, Fasan based his perspective on Kant’s categorical imperative to derive eleven presumably fundamental metalaws that can be used to govern relations between differing intelligent life forms. Kant’s categorical imperative, formulated in his *Groundwork for the Metaphysics of Morals* and central to his moral philosophy, denotes an absolute, unconditional requirement that is both required and justified as an end in itself.³³ One

³⁰ HALEY, *supra* note 21, at 414.

³¹ *Id.* at 411.

³² *Id.* at 414.

³³ Lauria, *supra* note 25.

formulation of Kant's categorical imperative states, "Act only on that maxim through which you can at the same time will that it should become a universal law."³⁴

Relying on a theory of absolute equity, earlier espoused by Haley as the one principle of human law that could be projected to metalaw, and conjoining Kant's formulation of the categorical imperative, Fasan derived eleven fundamental metalaws of general validity. In descending order of importance these are:

- (1) No partner of Metalaw may demand an impossibility;
- (2) No rule of Metalaw must be complied with when compliance would result in the practical suicide of the obligated beings;
- (3) All intelligent beings of the universe have in principle equal rights and values;
- (4) Every partner of Metalaw has the right of self-determination;
- (5) Any act which causes harm to another being must be avoided;
- (6) Every being is entitled to its own living space;
- (7) Every being has the right to defend itself against any harmful act performed by another being;
- (8) The principle of preserving one Being has priority over the development of another being;
- (9) In case of damage, the damager must restore the integrity of the damaged party;
- (10) Metalegal agreements and treaties must be kept; and
- (11) To help the other being by one's own activities is not a legal but a basic ethical principle.³⁵

In *Relations with Alien Intelligences*, Fasan proposed that metalaw provides the ground rules for relationship between humans and other sapient forms. If and

³⁴ IMMANUEL KANT, *GROUNDING FOR THE METAPHYSICS OF MORALS* (James W. Ellington trans., Hackett Publ'g 3d ed. 1993) (1785).

³⁵ ERNST FASAN, *RELATIONS WITH ALIEN INTELLIGENCES: THE SCIENTIFIC BASIS OF METALAW* (Berlin Verlag 1970).

when communication or encounter with extraterrestrial intelligence elsewhere in the universe should occur, Fasan asserted that the rules of metalaw would govern both human conduct and that of extraterrestrial beings so as to avoid mutually harmful activities.

III. CONCLUSION

While Haley's and Fasan's work has not gone uncriticized, the concept of metalaw and metalegal relations becomes more relevant as we now begin to open space to the general public by virtue of space tourism and other activities there. As we venture into essentially unknown territory, mapped only by basic probes, rovers, and other technology sent to survey these lands, we open the territory of outer space for settlement. As we move out to explore and to commercialize space, a higher probability of encountering alien intelligences exists.

Responsibility for the future is humanity's prime responsibility and obligation. Those individuals who attempt to formulate predictive conceptions of the future do so with a necessary, valid, and moral order. As we move against and free ourselves from the pull of gravity that constructed and constrained our evolution here on Earth, we subject our nature and ourselves to likely change in response to the new environment in which we find ourselves. Deciphering the metalaws that can help guide this change in the face of encounters with other forms of sapient beings is now a necessary and sufficient condition of our ability to emerge from planet Earth, survive this emergent metamorphosis, and take our rightful place in the greater cosmos.

Many may question why it is necessary to spend time on such speculative endeavors like deciphering the metalaws that may guide our relations with other intelligences when in fact we should be focusing on solving Earthly problems. Haley points out that Arthur C. Clarke noted several advantages of space exploration, including,

but not limited to, the possibility of replenishing the limited physical resources of Earth; the potential to relieve the pressures of Earth's population; the chance that humanity may only find a permanent outlet for its aggression and pioneering spirit through space flight; and the fact that space travel will produce an expansion of scientific knowledge unparalleled in history. More fundamentally, one of the most profound and important reasons to explore space is our intrinsic desire to make contact with other intelligent beings.³⁶ As we move out to encounter "what is," the metalaws of "what ought to be" should be predominant in our vision in anticipation of making contact with other intelligent beings other than those of our kind. One of the goals of science and the arts and of education for the next generations must be to decipher the metalegal code of metalaw in preparation for first contact, which may not be that far away.

³⁶ HALEY, *supra* note 21, at 421 (citing ARTHUR C. CLARKE, THE EXPLORATION OF SPACE 193-94 (1951)).