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THE DEVELOPMENT OF INTERNATIONAL NORMS TO ENHANCE SPACE SECURITY LAW IN AN ASYMMETRIC WORLD

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Abstract

Space security is becoming an increasing important and challenging issue for the international space law. This paper discusses how, in lieu of hard international norms found in the form of treaties, custom, and adjudicatory decisions, soft international law norms are being developed. This is attributable to the emerging organization of space activities in which States have asymmetric interest. To cope with this law is evolving through the development of soft norms both through the international incidents methodology and through the development of political agreements.

1. Introduction

At the heart of the origin of international space law is the Cold War. Space law developed as a reaction to quickly advancing technologies of the two superpowers that remained at odds with each other. As a result the principles were easily adopted as a result of negotiations between similarly situated symmetric powers that both saw strategic advantage in limiting their own actions in order to limit others. However in post Cold War setting such law making is confounded by the fact that space powers now have asymmetric interests in space. This causes a disconnect between States when they approach the negotiating table. Specifically, States, while seeking to normalize relations are also eager to either preserve or deconstruct asymmetric power structures. This disconnect is difficult for the law to respond to. especially when all sides have genuine concerns.

This paper will explore how the symmetrical nature of space law evolved, and how it is being currently challenged by asymmetry amongst players in the regime. Then it will explore how the creation of soft norms is helping to thaw this impasse and allowing space law to modernize itself to the post Cold War geopolitical climate.

2. Space Law and the Cold War

It is well known that when the U.S.S.R. launched *Sputnik I* in 1957, it caught many by surprise. The revelation that the Soviet Union had placed an artificial satellite in orbit, was coupled with the revelation that it was ahead on development of an intercontinental delivery system for warheads (nuclear or conventional). At the time both the U.S. and the U.S.S.R. were actively seeking nuclear technology small enough to be launched on a missile

a veiled race towards and ICBM.² This led to immediate scrambling by the international community to create a legal regime that would keep relations between the U.S. and the U.S.S.R. normalized.

The first step in this normalization process

around the world. To some extent the space race was

was General Assembly Resolution 1962 (XVIII) of 13 December 1963,³ which laid out a set of nine legal principles that established core values international space law. These principles were crafted in such a way as to guide the development of space exploration in a peaceful manner. One of the most important goals in the creation of these principles though was the need to normalize relations between the two superpowers who were vying for space supremacy at the time. For example, one of the core principles of space law is non-appropriation, which forbids states from making claims of sovereignty in space.⁴ While there are numerous reasons behind this principle, one of them is most certainly the removal of incentives for States to rush into space. In stopping a "land rush" in space, space law prevented the conflict that could have resulted from such activities. Any such conflict would have

http://www.thespacereview.com/article/1457/1.

¹ Dwayne Day, "The Sputnik Non-surprise," THE SPACE REVIEW, Sept. 8, 2009,

² The relation between space technology and ICBM technology can still be seen today in export control policies, which often times regulate the two in one breath. See for example 22 C.F.R. 121.1 (Category IV – Launch Vehicles, Guided Missiles, Ballistic Missiles, Rockets, Torpedoes, Bombs and Mines) (2009).

³ Declaration of Legal Principles Governing the Activities of States in the Exploration and Use of

Activities of States in the Exploration and Use of Outer Space, G.A. Res. 1962 (XVIII), U.N. GAOR, 18th Sess., 1280th plen. mtg., U.N. Doc. A/RES/1962(XVIII) (Dec. 13, 1963) [hereinafter Declaration of Legal Principles].

⁴ *Id*. at 3.

almost certainly been between the U.S.S.R. and the U.S. Both the United States and the Soviet Union came to the negotiating table with knowledge that it was strategically better to limit the potential for conflict in outer space, but to preserve national security at the same time.⁵

3. Post Cold War Relations

In the post Cold War era States are interested in more than just normalizing relations through the use of outer space. At the dawn of the space age, exploration was built around the ideas of military power and enhancing increasing international goodwill through the display of high technology capabilities. Today, the use of outer space technologies is centered on societal benefits and States to seek to use these technologies to enhance national security, economic interests, and numerous other domestic concerns. Newcomers to the game approach space in a different way than the established spacefarers. This can be seen via an analysis of one of the world's oldest space farers, the United States, with its newest, Iran.

The United States, being an early entrant into space, has built a vast reliance on space assets, from remote sensing satellites to weather satellites to communications satellites. Citizens of the United States interact with some aspect of space technology every day. This reliance can be found in both commercial and State interests. For example, satellites make up an integral part of the communications infrastructure for the United States, transmitting everything from voice communications to banking transactions. These communications are economically important for the iust telecommunications companies routing them, but also to all the businesses on the ground that benefit from the ability to send communications quickly and efficiently through these systems. The effect of a loss of such capabilities would potentially cause

ripples through the entire economy. Additionally, national security is often affected by reliance on satellites. Satellites have proved useful from monitoring other countries actions when in order to strategically estimate those States capabilities as well as to verify various disarmament treaties. State reliance on these technologies also comes in the field of military communications which are extremely important to military operations worldwide. Due to this extensive reliance on space activities the United States has a very real interest in preserving its ability to act in space. Therefore the United States puts a premium on legal principles that enhance its ability to preserve its space dominance.

Iran, on the other hand, entered the league of space faring nations when it launch Omid-1 into space on February 3, 2009.7 This satellite was claimed to be "equipped with experimental satellite control devices and power supply systems and was designed for gathering information and testing equipment."8 Iran's space program up to that point had been based around ground stations that relaved Intelsat communications and received Landsat data.9 The collected data was used for " Availability of remote sensing data assisted, for instance, in identifying areas suitable for development and those prone to earthquakes, floods, landslides and other natural disasters and threats; in investigating greenhouse gas emission and air pollution in the large urban areas; in monitoring wetlands and water basins those shared with neighbouring inland and countries."10 It is arguable that Iran was gaining a space benefits from the activities of other nations, however it continued to seek an indigenous capability in space operations. This may be in part to its isolation from the United States, the world leader in space operations. Furthermore proliferation fears have kept States from exporting space technologies to

⁵ This why the Outer Space Treaty forbids the "stationing" of nuclear weapons and WMDs in space. Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, opened for signature Jan. 27, 1967, 18 U.S.T. 2410, 610 U.N.T.S. 205, at Art. IV [hereinafter Outer Space Treaty]. By not having the weapons stationed in space the potential for conflict there is reduced, but by using the word stationed the right to transit ICBMs through space is preserved which enhancing national security. See generally Raymond L. Garthoff, Banning the Bomb in Outer Space, INTERNATIONAL SECURITY, v. 5, n. 3, p. 25, 34.

⁶ See for example Treaty Between the United States of America and the Union of Soviet Socialist Republics on the Reduction and Limitation of Strategic Offensive Arms, signed July 31, 1991, at Δrt IX

http://www.state.gov/www/global/arms/starthtm/start/start1.html.

⁷ Robert Tait, "Iran launches first domestically produced satellite," GUARDIAN.CO.UK, Feb. 3, 2009, http://www.guardian.co.uk/world/2009/feb/03/iran-satellite-launch-omid.

[°] Id

⁹ Parviz Tarikhi, "Iran's space programme: Riding high for peace and pride," SPACE POLICY, Aug. 2009, at

^{3.} ¹⁰ *Id*.

Iran, thus the Iranian position in the peaceful use of outer space is that of an underdog. What is significant about Iran's entrance as space-faring nation is the similarities in U.S. concerns about its program to those concerns raised about the Soviet program. Worries about Iran's ambitions to developing nuclear weapons coupled with its advances in a delivery system give many nations qualms. To this end there has been a movement to limit ballistic missile technology proliferation to Iran. While such measures are needed to enhance international peace and security, they also allow more mature space-faring nations to retain an asymmetric advantage in space through the denial of technology.

For these reasons, Iran's approach to the regulation of space will be very different from the United States approach. It is crucial to acknowledge that both the United States and Iran have genuine interests in their positions on the peaceful uses of outer space on international stage, and that due to the principle of State equality they both have very real negotiating positions. International peace and security is very important to the United States and the limitation of nuclear proliferation extraordinarily important issue for the entire world. Iran on the other hand has a very real interest in gaining the benefits that space technology has brought to other space-faring nations. While one can argue that nuclear nonproliferation should enjoy the position of an overriding concern, the issue is that both Iran and the United States are equal actors when it comes to the negotiation of new rules and norms on space, so the law must find ways in which to work around this seeming impasse so as to open up a dialogue. 12 In so doing the law can preserve international peace and security and allow states to gain the benefits of space technologies.

4. Developing Current Space Law

One of the most hotly debated issues in space law is whether the Outer Space Treaty should be opened up for renegotiation. Whether one agrees or disagrees, it is certain that any such renegotiation would result in a treaty that was vastly different from the signed in 1967.¹³ Of course, reality is such that

¹¹ See U.N.S.C. Res. 1747, U.N. Doc. S/RES/1747 (2007).

any such negotiations are likely not to happen. This is because the current international space law regime is a very permissive one. There are very few strict prohibitions within the regime. To this end States are able to interpret the norms contained therein to their best advantage, which makes the development of international space law resemble the incidents genre methodology as articulated by W. Michael Reisman.¹⁴

In this particular school of thought norms of international law are derived not from hard law, but from the reactions of international actors during international incidents, which are international conflicts in which are resolved without submitting the dispute to one of the traditional bodies of States make "inferences about international law. normative expectations of those who are politically effective in the international community." ¹⁵ Norms are then derived from the interpretations of the actors involved as well as the international community as a whole. This allows law to be discerned in areas where decisional units such as the judicial decision are lacking. Under this form of analysis the incident becomes the "epistemic unit" of law making, 16 and the incident becomes "a norm-indicator or norm generator in its own right." 17

The use of the incident methodology can be extraordinarily important in helping to understand how space law has developed to cope with asymmetric power structures that have developed in relation to outer space activities. The study of incidents can help to define the content of treaty norms. This is because:

The incidents approach does not suppose the inapplicability of rules, standards, and principles, nor does it deny the significance of international obligations. Rather, it supposes that such rules, standards, and principles find meaning in and through the relevant actors perceptions and Interpretations of them. 18

¹² This is not to say, necessarily, a bilateral dialogue (the U.S. and Iran do not currently have diplomatic relations), but a multilateral dialogue within the appropriate international body.

¹³ Joanne Irene Gabrynowicz, *The Outer Space Treaty* and Enhancing Space Security, in BUILDING THE

ARCHITECTURE FOR SUSTAINABLE SPACE SECURITY, U.N. DOC. UNIDIR/2006/17 (2006).

¹⁴ W. Michael Reisman, *International Incidents: Introduction to a New Genre in the Study of International Law*, 10 YALE J. INT'L LAW 1 (1984). ¹⁵ *Id*. at 2.

¹⁶ W. Allan Edmiston, III, comment, *Showdown in the South China Sea: An International Incidents Analysis of the So-called Spy Plane Crisis*, 16 EMORY INT'L LAW REV. 639, 650 (2002).

¹⁷ *Id.* at 647.

¹⁸ *Id.* at 654.

An example of this would be the two recent uses of ASAT technology by China and the United States. China's use of a ground to air missile to destroy the FY-1C weather satellite was met by widespread condemnation from the international community. The primary critique was that China had failed to engage the international community before it took an action that put many space assets at risk. On the other hand the United States, while being criticized for other reasons, was not critiqued on the amount of information that it released before hand. Academics in both situations turned to Article IX of the Outer Space Treaty to claim that the two nations had failed to comply with international obligation of requesting consultations. 19 In fact, an analysis under incidents genre methodology, leads to the conclusion that the result of the two incidents is that the United States' actions may have established a de minimis standard for the amount of transparency required to give other States the ability to request consultations.²⁰

The use of this type of analysis can be used to unveil the emerging content of international space law norms that have never been adjudicated. These incidents become the epistemic unit for space law since States have yet to take any space law dispute to an international body.²¹

5. Developing New Space Law

Since the failure of the Moon Agreement, the negotiation of a new multilateral treaty dealing with outer space seems unlikely.²² States are

19 See generally, Michael Mineiro, FY-1C and USA193 ASAT Intercepts: An Assessment of Legal
Obligations under Article IX of the Outer Space
Treaty, 34 J. Space L. 321 (2008) and Eugene Marder,
How China's Anti-Satellite Weapon Test Can Breathe
New Life into Article IX of the Outer Space Treaty,
Center for Defense Information (2008),
http://www.cdi.org/pdfs/ChineseASATtest.pdf.
20 P.J. Blount, Developments in Space Security Law,
Paper presented at the ESIL-ASIL Research Forum:
Changing Futures? Science and International Law,
Helsinki, Finland, Oct. 2-3, 2009 (on file with author).
21 For example, Alexander F. Cohen, Cosmos 954 and
the International Law of Satellite Accidents, 10 YALE J.

INT'L LAW 78 (1984).

reluctant to set limitations upon themselves, especially in light of the permissive nature of the current space law regime and the uncertainty with how technology will develop in the future. At the same time most States do see the value in limiting the use of weapons in space. Space-farers such as the United States or Russian Federation understand what they have to lose if space weapons are employed against their assets. Smaller space-farers see the danger in letting powerful states govern outer space The impasse exists because in any by might. negotiation the two sides have different motivations, thus the limitations they seek are different. Developed states still want to maintain their strategic advantage as well as preserve their right to self defense in order to protect their space assets, whereas developing states will seek to deconstruct that strategic advantage so as to gain equal footing.

The law must find ways to cope with these One of the most heralded sorts of situations. instruments currently is the Codes of Conduct. The Code of Conduct is a transparency and confidence building measure (TCBM) used to enhance trust and information sharing among States. These so called political measures create policies that States agree to abide by, yet are not be legally bound by. This allows States to agree to nonbinding measures which will somewhat restrict their behavior, but will not preclude them from exercising rights in the future if they need to. A successful example of this sort of instrument is the Hague Code of Conduct.²³ This TCBM requires States to exchange information before testing ICBMs or launching space craft. The premise is that the more open States are about such activities the less danger there is to international peace and security when states engaged in them.

The norms that result from these types of instruments can be characterized as soft norms and are commiserate with those that result from the interpretation of law through the incidents genre. This type of norm creation can be very effective. States are more comfortable with the more permissive nature of these norms, and the fact that they are politically binding more than legally binding allows states to try them out first. Of course the weakness in these norms lies in the fact that states do not acquire a legal obligation from participating in these norms and a breach will not lead to state responsibility. However, such rules when widely followed may take on the characteristics of customary international law.

6. The Drawbacks to Soft Norm Creation

²² See generally Sergio Marchisio, The Evolutionary Stages of the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), 31 J. SPACE L. 219, 224-231 (2005) (arguing that the "law-making phase" of the UNCOPUOS Legal Subcommittee ended in the 1980s).

²³ Hague Code of Conduct Against Ballistic Missile Proliferation (HCOC), effective Nov. 25, 2002.

These processes are not without their drawbacks, though. The creation of soft norms can be are risky way to broker power in the international context. One of the major critiques could be that the asymmetrically powerful have an advantage in norm creation and thus a "might makes right" regime could result. This risk certainly applies in context of space wherein there is a handful of dominant space-farers. While it can be argued that States with the greatest access to and risk in space should have the greatest say in the development of norms for space, this runs counter to the guiding principles of space law primarily that space is meant for the "benefit of all mankind."²⁴ However, it is inevitable that States will game the system and seek their own self interests in outer space. In soft norm creation though, other States still get an even hand, but they must exercise for silence is "not without normative significance."²⁵ The use of Article IX's right to request consultations can be very powerful in this respect. States are given full power to register their complaints so as to block soft norm creation.

States may also be wary that they could become bound without consent. For instance, in the incidents genre context, if third States are not vocal during the incident, they may find themselves in a position where the precedent taken from that incident later binds them. This risk is a real one, but States must be prepared to vocalize their diplomatic complaints.

While the creation of soft norms may not be the most effective way to develop international space law, it should be noted that this is indeed the way that space law is developing. Indeed, these soft norms over time can crystallize into customary international law if States begin to follow the norms consistently because they believe they are legally bound to do so.

7. The Disarmament Context

Soft norm creation has a very real role to play in the debate of over the weaponization of space both through the incidents genre and through the creation of Codes of Conduct or other TCBMs.

a. Incidents Genre and North Korea

North Korea's recent attempted launch of a satellite highlights how the incidents genre is important in the disarmament debate. Security

Council Resolution 1718 banned North Korea from engaging in ballistic missile activities. When North Korea announced the planned launch of its satellite in early 2009 many States claimed that any such launch would be in violation of the Security Council resolution. Of course, North Korea based its right to launch on the customary law of outer space which grants it free access to space. Before the launch North Korea released key information on the launch ostensibly fulfilling the *de minimis* requirement that resulted from the USA-193 incident.

While North Korea did everything possible to establish the launch as a space launch, the international community still viewed the launch as a ballistic missile test. In fact it resulted in widespread criticism from a variety of nations. While North Korea had valid legal claims under international space law, it seems that the international community felt that these were insufficient to justify the actions of the state. Indeed the resulting soft norm might be formulated as: free access to space principle does not allow States to violate hard law requirements promulgated from the U.N. Security Council. To this end the international community placed international peace and security above the interests of a State in one of the bedrock principles of international space law.

b. Soft Norms as the Result of Agreements

When China and the Soviet Union submitted the Draft Treaty on Prevention of the Placement of Weapons in Outer Space and of the Threat or Use of Force Against Outer Space Objects (PPWT) to the Conference on Disarrmament the United States immediately bristled.³⁰ This was due in part to an

²⁴ Outer Space Treaty, *supra* note 5, at Art. I. It should be noted that, much like the law of the sea, some States, due to their particular geopolitical situation, will *de facto* have a greater voice, despite the *de jure* equality.

²⁵ Edmiston, *supra* note 16, at 667.

²⁶ U.N.S.C. 1718, U.N. Doc. S/RES/1718 (2006) (the Security Council "[d]ecide[d] that the DPRK shall suspend all activities related to its ballistic missile programme.")

For instance, U.S. President Barak Obama stated that "North Korea broke the rules once more by testing a rocket that could be used for a long-range missile." *North Korea space launch 'fails,'* BBC, April 5, 2009, http://news.bbc.co.uk/2/hi/asia-pacific/7984254.stm?xid=rss-page.

²⁸ Declaration of Legal Principles, *supra* note 3, at 2.

²⁹ Blount, supra note 20, at 12.

³⁰ Letter dated 12 february 2008 from the permanent representative of the Russian Federation and the permanent representative of China to the Conference on Disarmament addressed to the Secretary-General of the Conference transmitting the Russian and Chinese texts of the draft "Treaty on Prevention of the Placement of Weapons in Outer

official space policy that stated that the United States would not negotiate such instruments.³¹ Since then however a code of conduct has been circulated by the European Union. This code of conduct seeks to create soft norms that the international community can agree to in order to enhance space security, and creates a much more palatable instrument for a country situated like the United States when compared to the PPWT. The Code of Conduct includes TCBMs and is an instrument "in which States would participate on a voluntary basis."³²

The Code starts by reaffirming general principles already found in space law such as freedom of access, the right to self-defense, cooperation in the prevention of harmful interference, and the promotion of the peaceful uses of outer space. 33 To this end it also requests that subscribing States reaffirm their commitment to the existing outer space law regime. 34 It then lists a number of rules that subscribing states are to abide by in order to reduce risk in space operations.

The Code of Conduct is different in form from the PPWT. Primarily, this is because of its political nature, but also differs in the way that it regulates space activities. Significantly, it places itself as an elaboration of principles already found in space law, thus it is creating a regime that interprets existing rights and obligations of States as opposed to a regime with new rights and obligations. For instance, the PPWT requires states "not to place in orbit around the Earth any objects carrying any kinds of weapons, not to install such weapons on celestial bodies and not to place such weapons in outer space

Space and of the Threat or Use of Force Against Outer Space Objects (PPWT)" introduced by the Russian Federation and China, U.N. Doc. CD/1839 (Feb. 29, 2008) [hereinafter PPWT].

in any other manner," which is a completely new obligation for States under the space law regime.³⁵ The code calls for States "to refrain from any intentional action which will or might bring about, directly or indirectly, the damage or destruction of outer space objects unless such action is conducted to reduce the creation of outer space debris and/or justified by imperative safety considerations," which can be interpreted as an elaboration on the "due regard" and "harmful contamination" portions of Article IX of the Outer Space Treaty.³⁶ While both treaties acknowledge the right of self defense, the Code of Conduct does not place physical limits on that right in its pursuit of enhance space security. The PPWT buts an affirmative obligation on States to limit weaponry which essentially limits the means and methods that a State might use for self defense. The Code of Conduct puts a soft prohibition on the intentional destruction of space objects, which ostensibly could be overcome by the right to self defense since it is enumerated as one of the Code's core principles.³⁷ Furthermore the Code of Conduct uses the word "refrain" which is a soft word and indicates restraint, but not necessarily a full prohibition. A State may refrain, until it must use such a weapon in self defense. Under the PPWT, States are affirmatively required not to place these weapons in orbit, and while the right to self defense is preserved it is not an exception to the rules of the treaty.

It is this sort of soft norm making that could begin to break the ice on space security negotiations. As of the writing of this paper United States' Space policy states that

[t]he United States will oppose the development of new legal regimes or other restrictions that seek to prohibit or limit U.S. access to or use of space. Proposed arms control agreements or restrictions must not impair the rights of the

³¹ U.S. National Space Policy, NSPD 49, 2006 at para. 2, http://www.fas.org/irp/offdocs/nspd/space.html ³² Council of the European Union, Council conclusions and draft Code of Conduct for outer space activities, 16560/08 (Dec. 3, 2008) [hereinafter Code of Conduct]. This Code was not submitted to the Conference on Disarmament, but was informally circulated.

³³ Id. at 2.

³⁴ *Id.* at 3.1. A possible problem may be that it includes as part of this regime the Comprehensive Nuclear Test Ban Treaty to which the United States is notoriously not a party. While the current administration is moving towards ratification, it is speculated that there may be enough opposition in the Senate to prevent it.

³⁵ PPWT, supra note 30, at Art. II.

of the Outer Space Treaty states that States "shall conduct all their activities in outer space, including the Moon and other celestial bodies, with due regard to the corresponding interests of all other States Parties to the Treaty. States Parties to the Treaty shall pursue studies of outer space, including the Moon and other celestial bodies, and conduct exploration of them so as to avoid their harmful contamination." Outer Space Treaty, *supra* note 5, Art. IX.

³⁷ Code of Conduct, supra note 32, at 2.

United States to conduct research, development, testing, and operations or other activities in space for U.S. national interests. ³⁸

This policy is one of the reasons for the recently deadlock in the Conference Disarmament, because the United States refused to adopt a program of work that required negotiations of a legal instrument on the Prevention of an Arms race in outer space.³⁹ The Code of Conduct might be amenable to the United States, since it reaffirms existing obligations, and preserves the right of the United States "to conduct research, development, testing, and operations or other activities in space for U.S. national interests" by not placing any affirmative limitations on space activities. In fact the requirements that it sets out for the intentional destruction of a satellite are commensurate with the procedures followed by the United States in the USA-193 incident, which displays how the Code of Conduct form is seeking to develop soft norms that have been established through international incidents. To this end it can be argued that the Code of Conduct gives a much fuller freedom of action to all States in outer space by using TCBMs to enhance security.

A final reason that this sort of soft norm development can be effective is that it can actually make it easier for the United States to become a party. Because the Code of Conduct is a political agreement, the President of the United States could sign it under his/her power to make and sign executive agreements. This would avoid the ratification process that can lead to the defeat of treaties (e.g. the Moon Agreement).

8. Conclusion

It has been said that the law making era in international space law has come to a close. This may be true in the sense that hard treaty norms are no longer being created. One of the reasons for this is the asymmetry of State interests in space. There is no longer a strategic reason for developed space powers to sign treaties that limit themselves. However, in lieu of this hard law making era, a soft law making regime is emerging. These norms result from both

the resolution of international incidents that can help inform the international community about the contours of already existing legal norms and through international agreements that are political in nature so as to give states the requisite comfort level needed for States to adopt them.

If the international community tracks the adoption of soft norms, it will begin to see how space law itself has developed to adjust to the post Cold War geopolitical situation in which "the Duopole of Space dominance is vanishing [sic]." The space law regime that resulted from the Cold War is not an impotent set of rules incapable of creating security in space, and as modern states interpret and develop the law the regime can become very effective in normalizing asymmetric relations in space.

 $^{^{38}}$ U.S. National Space Policy, supra note 31, at para.

After 12 years the CD finally adopted a program of work in 2009, but no substantive negotiations took place due to procedural deadlock. Decision for the establishment of a Programme of Work for the 2009 session, U.N. Doc. CD/1864 (May 29, 2009).

40 11 F.A.M. 723.2-2(C) (2009).

⁴¹ NICOLAS MATTEESCO MATTE, SPACE POLICY AND PROGRAMMES TODAY AND TOMMORROW: THE VANISHING DUOPOLE 3 (1980).