


September 2006

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Baker Spring
Heritage Foundation, baker.spring@edu.edu

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Recommended Citation

Spring, Baker (2006) "AN INCHOATE PROCESS FOR THE INTERNATIONAL REGULATION OF MILITARY ACTIVITIES IN SPACE," *Space and Defense*: Vol. 1: No. 0, Article 4.

DOI: 10.32873/uno.dc.sd.01.01.1238

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AN INCHOATE PROCESS FOR THE INTERNATIONAL REGULATION OF MILITARY ACTIVITIES IN SPACE

Baker Spring

Baker Spring is the F.M. Kirby Fellow in National Security Policy at the Heritage Foundation, Washington, D.C.

As the breadth and depth of military activities in space expand, demands are growing to regulate these activities at the international level. In some cases, these demands stem from the recognition that broader national security operations in space are moving away from a legacy of being dominated by secret intelligence activities and in the direction of more open military activities.¹ In other cases, they are driven by the efforts of arms control advocates to roll back the “weaponization of space.”² Regardless of the underlying motivations, the demands for international regulation are going to grow, and the debate will turn increasingly to the matter of how to proceed.

Recognizing that a limited number of international agreements to regulate both civilian

and military activities in space already exist, there are a number of options available to U.S. and foreign policy makers.³ A brief survey of these options was made available to the public by the Institute of Air and Space Law at McGill University in Montreal, Canada, in 2005.⁴ This survey serves as a good guide to the available options and as a starting point for assessing the strength and weaknesses of each one, particularly at the international level.⁵

¹The Eisenhower Administration initiated U.S. national security operations in space with a preference for intelligence activities with the signing of NSC 5520 on 20 May 1955. For a history of these early policies, see Walter A. McDougall, *The Heavens and the Earth: A Political History of the Space Age* (Baltimore: Johns Hopkins University Press, 1997). For the text of NSC 5520 and related documents, see John M. Logsdon, ed., *Exploring the Unknown*, vol. 1, *Organizing for Exploration* (Washington, D.C.: NASA SP-4407); John M. Logsdon, ed., *Exploring the Unknown*, vol. 2, *External Relationships* (Washington, D.C.: NASA SP-4407, 1996); and Stephanie Feyock, compiler, *National Security Space Project, Presidential Decisions Documents* (Washington, D.C.: George C. Marshall Institute, 2006), pp. 1–20.

²Michael Krepon (with Christopher Clary), *Space Assurance or Space Dominance? The Case Against Weaponizing Space* (Washington, D.C.: Henry L. Stimson Center, 2003).

³Among the existing international agreements are the (1) Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, Including the Moon and Other Celestial Bodies, of 1967; (2) Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space of 1968; (3) Convention on International Liability for Damage Caused by Space Objects of 1972; (4) Convention on Registration of Objects Launched into Outer Space of 1975; (5) Agreement Governing the Activities of States on the Moon and Other Celestial Bodies of 1979; and (6) Treaty Banning Nuclear Weapons Tests in the Atmosphere, in Outer Space and Under Water of 1963. As a result, there is also a rich body of international law related to activities in space. A source of this body of law, although by no means the only one, is the Legal Subcommittee of the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS). The records of the Legal Subcommittee are available at: [UNOOSA Legal Subcommittee](#).

⁴“Policy and Legislative Options for Parliamentarians Regarding Possible Deployment of Further Military Capabilities in Outer Space,” (Montreal: McGill University, Institute of Air and Space, Faculty of Law, June 2005).

⁵The McGill University study includes options for purely domestic laws and regulations. This article will focus on the options available for the international regulation of military activities in space and touch on U.S.

The weakness of the McGill University study is that it treats the options discretely and not in the context of a broader international political process. This is not to say that the study implies that one of the options may be pursued only at the expense of the others, but that it does not describe an inchoate process by which the unilateral actions and non-actions of individual states result in a form of common law.⁶ The results of this inchoate process may evolve into formal agreements, depending on circumstances.

In fact, much of what passes for the practical international regulation of military space activities today has emerged from an inchoate process. The formal agreements are less important in influencing the conduct of military activities in space. For example, nations have chosen not to take military actions against satellites flying over their territories in times of peace, although they certainly do so against military aircraft that penetrate their airspace without authorization. As a result, nations treat territorial airspace in military terms in a way that is fundamentally different from how they treat outer space, even though there is no formal international agreement that distinguishes between the two.⁷ This critical distinction, while broadly accepted by states today, resulted from a process utterly lacking in formality and order. It stemmed from nothing more than emerging patterns of behavior. This is not to say that the inchoate process will never lead to a formal

agreement or that formal agreements are inappropriate in all instances.⁸

Assessing the Options

Despite this weakness, the McGill University study provides a point of departure for exploring

formal agreements are less important in influencing the conduct of the military

how this inchoate approach to regulating military space activities at the international level may be pursued in the future. Such an exploration starts with assessing the strengths and weaknesses of five discrete options for the international regulation of military space activities.

Maintain Existing Legal Regime for Regulating Military Space Activities

The process for establishing international regulation of military activities in space is not devoid of formal treaties and other international agreements. This body of formal agreements is anchored by the Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies, of 1967, frequently referred to simply as the Outer Space Treaty.⁹ While the

government policy guidance regarding military activities in space, but it will not address the domestic legislative and regulatory options.

⁶*Webster's Encyclopedic Unabridged Dictionary of the English Language* defines inchoate, among other ways, as “not organized; lacking order.”

⁷This distinct treatment of outer space and territorial airspace emerged despite contentions by the U.S. Air Force that both were part of a continuum. For a description of the Air Force's views on this issue, see Benjamin S. Lambeth, *Mastering the Ultimate High Ground: Next Steps in the Military Uses of Space*, (Santa Monica, Calif.: RAND, 2003), pp. 37–59.

⁸The United States recently cast the sole vote in opposition to a United Nations General Assembly resolution to develop additional transparency and confidence-building measures regarding activities in outer space. The broad scope of the resolution and the open-ended agenda it establishes invited U.S. opposition. A more narrowly drawn resolution on transparency and confidence-building measures, however, could serve U.S. interests if it codifies a clear pattern of behavior that has served U.S. interests to date. For a text of the resolution, see “[Resolution Adopted by the General Assembly: 60/66. Transparency and confidence-building measures in outer space activities](#),” 61st plenary meeting, 8 December 2005.

⁹For the text of the Outer Space Treaty and a brief description of the negotiating history, see United States Arms Control and Disarmament Agency, *Arms Control and*

content of the Outer Space Treaty is far broader than the regulation of military activities in space, its provisions include a number of limitations on such activities. Article IV prohibits the placement of weapons of mass destruction in orbit around the Earth, on the Moon and other celestial bodies, or anywhere else in outer space. The same article also prohibits the placement of military installations, the conduct of weapons tests, and the conduct of military maneuvers on the Moon and other celestial bodies.

Other treaties are more appropriately described as arms control treaties that contain provisions related to military activities in space. For example, Article I of the 1963 Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water, commonly referred to as the Limited Test Ban Treaty, prohibits the conduct of nuclear weapon test explosions in outer space.¹⁰

Continuing to observe the existing regime of international agreements regulating military activities in space is essentially an argument for maintaining the status quo. The most common argument against this option is that the existing legal regime is not broad enough and that some military activities currently not prohibited by the regime should be banned. These arguments most frequently come from those seeking to limit U.S. military options in space. Among the activities that some would seek to ban are the development, testing, and deployment of anti-satellite weapons and space-based non-nuclear ballistic missile defense interceptors.¹¹

Disarmament Agreements: Texts and Histories of the Negotiations (Washington, D.C.: ACDA, 1990), pp. 52–63.

¹⁰For the text of the Limited Test Ban Treaty and a brief description of the negotiating history, see *ibid.*, pp. 37–49.

¹¹L. Skotnikov, Permanent Representative of the Russian Federation, Statement at Plenary Meeting of the Conference on Disarmament, “Prevention of an Arms Race in Outer Space,” 26 August 2004. Cited hereafter as Skotnikov Statement.

Other arguments against simply maintaining the legal status quo assume there are fundamental shortcomings in the current regime’s existing provisions or the potential for significant advantages derived from new approaches. If the current legal regime contains errors of omission, as some contend, it almost certainly contains errors of commission. For example, Article IV of the Outer Space Treaty prohibits the placement of military installations on the Moon. Simply accepting the status quo in perpetuity in this case assumes that the United States will never have a compelling security interest in placing a military installation on the Moon. At a minimum, it is plausible that the United States will find such an interest at some point in the future.

Strengthen Existing International Legal Regime for Regulating Military Space Activities

This option would identify ways to broaden the application of the existing international legal regime regarding military space activities that fall short of amending existing agreements or negotiating new ones. Among these are (1) seeking universal state participation in all five multilateral space law treaties; (2) using the consultative mechanism in Article IX of the Outer Space Treaty to regulate military activities in accordance with proper interpretations of the Treaty; (3) increasing transparency regarding military activities in space by expanding the information that state parties provide under the 1975 Convention on the Registration of Objects Launched into Outer Space, or Registration Convention; and (4) adding a dispute settlement mechanism to the procedures of the International Telecommunications Union, particularly with regard to preventing “harmful interference” with military space missions.¹²

In substantive terms, this option suffers from the same shortcomings as those that apply to the option of maintaining the international legal

¹²Institute of Air and Space, “Policy and Legislative Options,” pp. 7–10.

status quo. Fundamentally, it leaves little room for addressing developing problems regarding the regulation of military activities in space or for remedying existing problems within the international legal framework. The proper scope of interpretation under the various applicable treaties, and most particularly those in the category of regulating both civilian and military activities in space, is simply too narrow.

Further, any attempt to go beyond the traditional scope of interpreting a treaty will be very risky. In the United States, the Senate, which has the constitutional authority to consent to the ratification of treaties, may quickly conclude that a far-reaching reinterpretation of an existing treaty is an attempt to circumvent it. This is because the executive branch is legally bound to execute a treaty ratified by the Senate in a manner that is consistent with its terms. Substantive changes in a treaty require formal amendment, subject to Senate advice and consent. As a result, a proposal to expand significantly the reporting requirements under the Registration Convention by interpretation, for example, could prompt objections from the U.S. Senate.¹³

The Senate also has been particularly reluctant to approve treaties with far-reaching security implications that include mandatory dispute

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settlement powers lodged in international organizations. This issue is a contributing factor in the U.S. determination not to ratify the United Nations Convention on the Law of the Sea.¹⁴ An attempt to establish such a mechanism under the International Telecommunications Union will likely meet similar objections.

Adopt New Multilateral Agreements to Regulate Military Space Activities

This approach would remedy perceived shortcomings in the existing legal regime for regulating military activities in space by formally amending the regime, in many cases by treaty. Substantive proposals to do this include: (1) amending the Registration Convention to expand transparency, which, as noted above, would attempt to do so by interpretation; (2) a multilateral treaty establishing a code of conduct governing military activities in space;¹⁵ (3) a multilateral agreement to ban a specific type of space-based weapon, such as an anti-satellite weapon; and (4) a multilateral agreement to ban comprehensively all types of “space-based weapons.”¹⁶ The strength of this approach is that it affords states the opportunity to address the full array of issues regarding the conduct of military activities in space.

The process of negotiating new agreements, however, has a fundamental drawback. Leaving aside the specific objections to specific future agreements, including issues of verification and enforcement, the problem with new treaties or formal agreements is that the negotiation process is too blunt and inflexible to make immediate contributions to strengthening U.S. national

¹³Compliance with the Registration Convention has been spotty. The issue of obtaining compliance with Convention should not be confused with the issue of expanding the substantive requirements of the Convention through reinterpretation. The Senate is not likely to object to efforts to obtain compliance, while it is likely to object to certain reinterpretations. For an explanation of the problems of compliance with the Registration Convention, see Jonathan McDowell, “[Adherence to the 1976 Convention on Registration of Objects Launched into Outer Space](#).”

¹⁴Marjorie Ann Browne, “The Law of the Sea Convention and U.S. Policy,” (Washington, D.C.: Congressional Research Service, Library of Congress, 2 March 2004), p. 10.

¹⁵For a comprehensive description of a code of conduct governing activities in space, see “[Code of Conduct for Outer Space](#),” (Washington, D.C.: Henry L. Stimson Center).

¹⁶Skotnikov Statement.

security relative to space-based activities. Technological advancements are too rapid to regulate through this process. This is the case despite the relatively long timelines for the development and deployment of space systems. The negotiations will generally lag behind the technological advancements.

The alternative is to negotiate sweeping prohibitions without understanding what technologies may be applicable. This alternative will lead to confusion and ultimately prove unable to stand the test of time. For example, Article V of the 1972 Anti-Ballistic Missile (ABM) Treaty sought to ban the development, testing, and deployment of all possible ABM systems or components based in space, among other places. Article VI sought to ban giving non-ABM systems an ABM capability.¹⁷ ABM Treaty negotiators, recognizing this problem, attached Agreed Statement D to the Treaty.¹⁸ This statement conceded that the prohibitions included in the Treaty would be subject to further negotiations if ABM technologies “based on other physical principles” emerged. This contradiction led to an explosive debate over the “narrow” and “broad” interpretations of the ABM Treaty in the United States.¹⁹ In an extraordinary step, the United States withdrew from the ABM Treaty in 2002. While many important treaties, including the ABM Treaty, contain withdrawal provisions, exercising the withdrawal provisions is rarely done. The sweeping nature of the prohibitions included in the Treaty was a

contributing factor in President George W. Bush’s decision to withdraw.²⁰

Adopt New Military Space Agreements at the Bilateral or Regional Level

This option attempts to limit the procedural complexity stemming from the negotiation of broad-based multilateral treaties. It also recognizes that the preeminent forum for such broad-based negotiations, the United Nations Conference on Disarmament, is ineffective.²¹ This option also recognizes that even broadly accepted arms control agreements can be negotiated by a few states at the outset. The Limited Test Ban Treaty, for example, was initially negotiated by a five-state subcommittee of the Conference on Disarmament in 1955.²²

The chief shortcoming of this option is the same as the option above. The negotiation process is likely to remain lengthy, and the pace of technological advancement is all but certain to outstrip the pace of negotiations. This approach also carries the inherent shortcoming that the geography of space makes it an unlikely subject for bilateral or regional negotiations that could later have global applications. For example, negotiations to set demarcations of territorial waters between states have helped to establish more broadly accepted principles on rights of transit for shipping. Space does not offer a similar opportunity. In fact, regulating military activities in space is best suited to a broadly participatory set of negotiations if a formal negotiating process is the preferred approach. Otherwise, the bilateral and regional process could become unwieldy, particularly if more states engage in activities in space.

¹⁷For the text of the ABM Treaty and a brief description of the negotiating history, see United States Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements*, pp. 157–161.

¹⁸*Ibid.*, p. 162.

¹⁹For a brief description of this debate, see Lt. Col. Peter L. Hays, *United States Military Space: Into the Twenty-First Century* INSS Occasional Paper 42, (USAF Academy, Colo.: Institute for National Security Studies, September 2002), pp. 92-95.

²⁰Carnegie Endowment for International Peace, “[Administration Missile Defense Papers](#),” (Washington, D.C.: Carnegie Endowment, July 2001).

²¹Task Force on the United Nations, “American Interests and UN Reform,” (Washington, D.C.: United States Institute of Peace, 2005), pp. 74 and 84.

²²United States Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements*, pp. 37–44.

Adopt Unilateral Declarations

Arms control advocates sometimes point to this approach as a means for initiating a diplomatic process that will prevent the “weaponization of space.” Specifically, they point to Russia’s October 2004 unilateral declaration at the United Nations Conference on Disarmament that it would not be “the first [state] to deploy any weapons in outer space....”²³ In fact, the option of pursuing unilateral declarations is the one most in keeping with the inchoate process for regulating military activities in space.

The critical difference between the option of issuing unilateral declarations and the inchoate process is that the inchoate process is far broader, both substantively and in the means of pursuit. Substantively, the inchoate process is not focused exclusively or even predominantly on arms control. At the outset, President Dwight Eisenhower sought to use the inchoate process to establish the freedom of passage for vehicles through space.²⁴ His effort had little to do with arms control but much to do with monitoring the Soviet Union.

Moreover, unilateral declarations are but one effective procedural tool available to the inchoate process. Other tools include unilateral actions, collective actions, and joint declarations. In fact, unilateral and collective actions are the most effective because the pattern of behavior that emerges is likely to have the most powerful impact on regulating military activities in space. In this case, the cliché that actions speak louder than words is clearly applicable. Further, the inchoate process, unlike the option of issuing unilateral declarations, is anything but transparent. Many of the actions the United

States has taken in space were based on secret presidential directives and National Security Council documents.²⁵

Past Operation of the Inchoate Process

Recognizing that the inchoate process has been used extensively in the past to regulate military activities in space is essential to understanding its merits as a procedural approach for regulating such activities in the future. Depending on this approach in the future will not represent a sharp departure from the approach that has been used to date. Three examples demonstrate why this is so.

Dominance of Intelligence Operations over Military Operations

As noted, the Eisenhower Administration sought to establish a U.S. national security presence in space for intelligence reasons more than for military reasons. This determined national policy rendered international agreements to regulate national security activities in space problematic, given that the relationship between intelligence and the diplomatic process is at best tenuous. This limitation served to restrain such diplomacy even in the narrower area of regulating military activities in space. For example, it is unclear at what point an intelligence activity becomes a military targeting activity.²⁶ In the end, both the United States and the Soviet Union came to accept such satellite

the inchoate process is not focused exclusively or even predominately on arms control

²³Center for Defense Information, *CDI Russia Weekly*, (Washington, D.C.: CDI, 14 October 2004).

²⁴R. Cargill Hall, “National Space Policy and Its Interaction with the U.S. Military Space Program,” in *Military Space and National Policy: Record and Interpretation* (Washington, D.C.: George C. Marshall Institute, 2006); and McDougall, *Heavens and Earth*.

²⁵R. Cargill Hall, compiler, “Presidential Decisions: NSC Documents, Supplement: Newly Declassified Excerpts,” (Washington, D.C.: George C. Marshall Institute, National Security Space Project, 2006).

²⁶The Soviet Union, for example, rejected President Eisenhower’s “Open Skies” proposal in 1955 in part because it viewed such monitoring as a targeting activity. See Hall, “National Space Policy and Its Interaction with the U.S. Military Space Program,” p. 2.

monitoring without a specific international agreement legitimizing these activities. In short, the pattern of behavior between the two superpowers was a more powerful driver than the diplomatic process.

This is not to say that the predominant role of intelligence activities in space closed off all formal diplomacy for regulating military activities in space, just that formal agreements followed the pattern of behavior established primarily by the United States and the Soviet

**no treaty defines
the upper limit of
airspace and the
lower limit of
space**

Union. Article IV of the Outer Space Treaty banned the deployment of weapons of mass destruction in space and prohibited the placement of military installations on celestial bodies such as the Moon. Further, there

were limited provisions in later treaties that did extend legitimacy to space-based intelligence activities. For example, Article XII of the ABM Treaty barred interfering with “national technical means of verification” of the Treaty’s provisions, and Article V of the 1972 Interim Agreement Between the United States of America and the Union of Soviet Socialist Republics on Certain Measures with Respect to the Limitation of Strategic Offensive Arms contained a similar provision.²⁷ The limited areas of formal agreement, however, meant that the process of tacitly accepting national security activities in space, consistent with the inchoate process, was the dominant approach to international regulation.

***Lack of Demarcation Between
Territorial Airspace and Outer Space***

To this day, there is no formal treaty or non-treaty international agreement that defines the upper limit of territorial airspace and the lower limit of

outer space. The Outer Space Treaty does not include a definition. Nevertheless, states have generally come to accept that there is a fundamental difference between the two and behave in a way that tacitly acknowledges that there is some kind of demarcation line.

The lack of a formal definition, generally speaking, has not led to unintended conflicts or destabilizing actions between or among states. While the fact that there exists a zone where aircraft cannot fly due to the lack of atmosphere and where satellites are unable to maintain orbit contributes to this fortunate outcome, it is also an argument that demonstrates the strength of the inchoate process for regulating military activities in space. The informal and unstructured approach to regulating military activities in space, even with respect to something as simple and fundamental as establishing the geographic definition of space, has produced few adverse outcomes.

***Distinctions between Space and Celestial
Bodies as International Territory and
Space Vehicles as Sovereign Property***

This example demonstrates how the inchoate process can lead ultimately to formal international agreements. At the outset of the space age, it was unclear whether space was an extension of territorial airspace. It was also unclear whether satellites, like national flag vessels on the high seas, would be afforded the protection of sovereign property. As the United States and the Soviet Union, by their behavior, came to accept outer space as international territory, they also behaved in a way that treated their satellites as sovereign property.

In 1961, the United Nations General Assembly (UNGA) adopted Resolution 1721, which called for national authorities to register satellites with international authorities.²⁸ In 1963, the UNGA adopted Resolution 1884, which designated states

²⁷For the text of the Interim Agreement, see United States Arms Control and Disarmament Agency, *Arms Control and Disarmament Agreements*, pp. 169–171.

²⁸Hays, *United States Military Space*, pp. 80–81.

as the responsible powers for all activities in space and sought to assign states jurisdiction regarding spacecraft.²⁹ The issue of national jurisdiction over spacecraft was formally codified in the Outer Space Treaty in 1967.³⁰ Agreements requiring the return of satellites to the launching state (Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space), establishing liability for the damage caused by satellites and other spacecraft (Convention on International Liability for Damage Caused by Space Objects), and registering satellites (Convention on Registration of Objects Launched into Outer Space) were adopted in 1968, 1972, and 1976, respectively.³¹

While national entities were ultimately given jurisdiction over the spacecraft they launched or registered by formal agreements, these agreements followed the behavior patterns established primarily by the United States and the Soviet Union. They did not establish initial rules in abstract terms that the early space powers were then forced to observe.

The Moon Agreement and Proceeding with Formal Agreements First: An Example of Overreaching?

If formal agreements followed established patterns of behavior regarding national jurisdiction over satellites and other spacecraft, the opposite approach was taken to prohibit claims of sovereignty over and the emplacement of military installations on the Moon and other celestial bodies. Article II of the Outer Space Treaty prohibits claims of sovereignty, and

Article IV prohibits the placement of military installations. The Outer Space Treaty was opened for signature in 1967 and entered into force in 1968, well before Neil Armstrong’s July 1969 Moon landing.

The general prohibitions regarding celestial bodies established in the Outer Space Treaty were strengthened and specified in the Agreement Governing the Activities of States on the Moon and Other Celestial Bodies.³² Commonly referred to as the Moon Agreement, it was opened for signature in 1979 and entered into force in 1984. The United States has opted not to join, and only 12 states are currently participants; an additional four states have signed the Agreement but have yet to ratify it.³³

The mere fact of such limited participation in the Moon Agreement should serve as a warning about attempts to regulate either commercial or military activities in space by initially adopting sweeping prohibitions that are not based on at least an initial pattern of behavior by relevant states. In addition, circumstances serve to indicate, although do not prove, that limitations imposed by the relevant provisions of the Outer Space Treaty and the Moon Agreement have curtailed efforts to develop the Moon, whether for economic or military gain. Klaus Heiss of High Frontier, for example, has argued that technological advancements should make it feasible to reap both economic and national security gains from a permanent human presence

²⁹Ibid., p. 80.

³⁰Ibid., pp. 81–86.

³¹Institute of Air and Space, “Policy and Legislative Options for Parliamentarians Regarding Possible Deployment of Further Military Capabilities in Outer Space,” p. 5; see also M.V. Peterson, *International Regimes for the Final Frontier* (Albany, NY: State University of New York Press, 2005).

³²For the text of the Agreement, see [United Nations Treaties and Principles on Outer Space: Text of Treaties and Principles Governing the Activities of States in the Exploration and Use of Outer Space, Adopted by the United Nations General Assembly](#) (New York: United Nations, 2002), pp. 27-35.

³³U.S. Department of State response to author’s query, 24 May 2006. The following states have ratified the Moon Agreement: Australia, Austria, Belgium, Chile, Kazakhstan, Mexico, Morocco, the Netherlands, Pakistan, Peru, Philippines, and Uruguay. The following states have signed the Moon Agreement but have not ratified it: France, Guatemala, India, and Romania.

on the Moon.³⁴ Yet attempts to develop the Moon have not been made. The current circumstances certainly suggest that the prohibitions regarding the exploitation of the Moon that are present in both the Outer Space Treaty and the Moon Agreement have been a contributing factor in the lack of a determined effort to establish a permanent human presence on the Moon. The opportunity costs derived from this lack of effort are incalculable.

The Inchoate Process: How It May Work in the Future

Past use of the inchoate process for the regulation of both broader national security and narrower military activities in space provides compelling evidence that this process can continue to work in future. The inherent flexibility and adaptability of this process mean that advances in technology, changes in the threat and other political circumstances, and changes in military requirements will not undermine its effectiveness as a tool. The same characteristics will reduce the risks to national security resulting from miscalculation or mistake in negotiating and entering into formal treaties and other international agreements.

As the United States continues to use the inchoate process to regulate military activities in space, it should observe seven guiding principles.

Establishing Clear and Determined National Policy. Precisely because an inchoate process for regulating military activities in space at the international level is informal and open-ended, it requires a clearly defined and visionary national policy toward space. Only a clear national policy can specify properly the patterns of behavior that will define the scope and content of international regulation of future military activities in space that serves the national interest. The visionary

and determined leadership of President Eisenhower at the outset of the space age served to drive the inchoate process regarding the international regulation of all national security-related space activities for several decades. This is not to say, however, that all aspects of this policy will be transparent to foreign states and the public at large. President Eisenhower's policy was no less clear or determined because major portions of it were kept secret.

The pillars of this national policy should include—but should not necessarily be limited to—the following:

Adopting a maritime-based model. Past actions regarding the management of U.S. military activities in space have been more in keeping with the maritime tradition than with the application of air power. Roughly speaking, the United States has treated outer space more like the high seas than territorial airspace. It has treated satellites and other spacecraft more like naval vessels in international waters. The exception has been the treatment of celestial bodies, particularly the Moon. The maritime tradition assumes that unclaimed territories would be subject to national appropriation as a natural outgrowth of the process of exploration. Ties to the appropriated lands, both commercial and military, were maintained through the application of sea power.

**the United States
should seek
practical control
over high-value
areas of the Moon**

U.S. national policy regarding military activities in space should sustain and expand upon the traditions already established regarding the treatment of outer space and satellites and spacecraft. Regarding the military exploitation of celestial bodies, and most particularly the Moon, U.S. policy should move away from existing precedents and toward a policy more in keeping with the maritime

³⁴Klaus P. Heiss, "Tapping the Wealth of the Moon," *The Journal of Social, Political and Economic Studies*, Vol. 29, No. 1 (Spring 2004).

tradition. Specifically, the United States should seek to obtain practical control over high-value areas of the Moon, although the point at which this will require changing the existing web of international agreements regarding the Moon and other celestial bodies is unclear.

Defending the homeland against attacks from and through space. The highest priority of any nation’s defense policy is to protect the homeland against attack. It matters little, from the broad perspective, whether such attacks originate from across borders on land, from the sea, through the air, or through space.

Today, the greatest threat to the U.S. homeland from space is ballistic missiles. Since most types of these missiles spend significant portions of their flight times in space, the most effective defenses will likewise be deployed in space.³⁵ U.S. policy should direct the military to deploy effective space-based interceptors for countering ballistic missiles in flight as soon as possible.

Ensuring the survivability of space assets. The U.S. Navy’s first order of business is to design, build, and deploy vessels that can operate in the maritime environment and defend themselves against attack. This means that the Navy must also maintain a fleet that is large enough for the loss of vessels to natural causes or purposeful attack not to render the Navy incapable of fulfilling its missions.

The same approach should apply to U.S. military spacecraft. They should be designed to protect themselves through both active and passive defenses. This starts with a robust capability to detect, track, and target any and all threats to their

survival. U.S. policy should further direct that the fleet of spacecraft is large enough that replacements may be deployed quickly and efficiently in the event of losses.

Protecting space lines of communication. The Navy recognizes that the seas are places through which international military forces and commerce transit. Despite the fact that international waters are outside the national jurisdiction of the United States, the Navy takes it upon itself to provide the practical means to insure the security of these channels of activity by confronting states that make unjustified territorial claims or that take forceful action to interrupt peaceful transit. Space also hosts important channels of military and commercial activity. These channels are expanding in both volume and importance. U.S. policy should insure that U.S. space forces are capable of protecting these channels against attack. The task of protecting space lines of communication can start with the development of military capabilities to protect U.S. government and commercial satellites against attacks designed to curtail operations or disrupt their orbits.

Protecting rights of passage and commerce. From the outset of the space age, it has been U.S. policy to establish the right of passage through space. This policy has been largely successful. This makes space functionally equivalent to the sea regarding the exercise of these rights.

It is critical to recognize that, ultimately, these rights at sea are protected not by international agreements that proclaim them, but by the might of the U.S. Navy. International agreements proclaiming the same rights regarding space will likewise prove insufficient to protect them.³⁶ U.S. military power must be sufficient to counter

³⁵For a detailed description of how best to counter ballistic missiles with space-based interceptors, including how to address issues related to the international regime governing military activities in space, see [*Missile Defense, the Space Relationship, and the Twenty-First Century, Report of the Independent Working Group on Missile Defense*](#) (Institute for Foreign Policy Analysis, Cambridge, Mass., and Washington, D.C., 2006).

³⁶For discussion of the complex relationship between military and civilian operators in space, see Elizabeth Waldrop, “[Integration of Military and Civilian Space Assets: Legal and National Security Implications](#),” *Air Force Law Review*, Spring 2004.

any significant challenges to these rights, both by states and non-state actors.

Maintaining the ability to project power through space. Projecting U.S. power over the sea has been a key Navy task since shortly after the founding of the nation. During World War II, the German government revolutionized warfare when it demonstrated its ability to project military power through space by launching V-2 rockets. The United States and the Soviet Union came to dominate this capability during the Cold War by fielding large numbers of nuclear-armed ballistic missiles. Many nations are now following suit by fielding their own ballistic missiles.

In the future, power could well be projected through space by means other than ballistic missiles. These could include manned space planes and directed energy weapons. U.S. policy should therefore direct that the military maintain an unquestioned advantage in the means of projecting power through space. This is not to say that procuring and deploying these capabilities will be an easy task. Ultimately, it will depend on bringing the relevant technologies to maturity.

Adopt Flexible Tactics

If the inchoate process for regulating military activities in space at the international level demands a determined national policy to make it useful in furthering the national interest, it also requires flexible tactics. The chief advantage in the process's informality is that it will not result in the establishment of international rules that redound to the nation's disadvantage following the occurrence of unforeseen events.

Therefore, U.S. policy should not allow the appearance of inconsistency to prevent it from adopting new and different approaches to maintaining its military advantage in space. For example, a U.S. technological breakthrough on a flexible and cost-effective means for removing

space debris may allow an approach to protecting space lines of communication that emphasizes mitigation over prevention. Indeed, responding to such developments should be seen as a natural part of the establishment of a pattern of behavior that will form a sturdy basis for the international regulation of military activities in space. It is in keeping with the common-law tradition in the domestic setting.

Recognize the Preeminence of State Sovereignty as the Core of the Inchoate Process

A rational process for regulating military activities in space at the international level must be based on recognition of the preeminence of state sovereignty. The system of state sovereignty is under attack from forces below and above; it needs to be defended.³⁷ The forces that are attacking state sovereignty from below are those of civil conflict and chaos and are not relevant to the issue of regulating military activities in space. On the other hand, the forces attacking state sovereignty from above are quite relevant.

U.S. policy should direct the military to maintain an unquestioned advantage in projecting power through space

Leaders of the United Nations Secretariat and UN-related organizations are demonstrating an ambition to override state sovereignty by arrogating to them the power to arbitrate disputes between states.³⁸ The inchoate process is ideally

³⁷For forceful arguments in favor of shoring up the state system, see Jeremy A. Rabkin, *The Case for Sovereignty: Why the World Should Welcome American Independence* (Washington, D.C.: AEI Press, 2004), and George P. Shultz, "A Changed World," The Henry A. Kissinger Lecture at the Library of Congress, 11 February 2004, as transcribed by the Foreign Policy Research Institute.

³⁸The mandatory dispute settlement procedures under the 1982 United Nations Convention on the Law of the Sea are prime examples of this arrogation of power. This example is particularly relevant to the issue of the international

suited to thwarting this arrogation of power because it is largely incompatible with the creation of international organizations that have every incentive to expand their authority. Under no circumstances should the United States enter into a treaty or other international agreement that gives an international organization the authority to arbitrate disputes between participating states regarding military activities in space. At most, the powers of such international organizations should extend only to mediating such disputes.

***Account for the Presence
of Private Assets in Space***

Clearly, space is not the exclusive domain of governments. Private entities have an extensive presence in space as well. The inchoate process for regulating military activities in space provides sufficient flexibility to allow national authorities, and most specifically military authorities, to establish responsibilities for defending privately held assets in space. Ultimately, it is the private sector’s use of space that will generate wealth and prosperity.

The proper role of national militaries in defending the space-based assets of private citizens is not entirely clear at this time. In the case of the United States, the military has not focused as much attention on defending the privately held space assets of U.S. citizens or corporations as it has on defending government assets that will provide direct support to space-related and other military operations.³⁹ This is not solely an issue of national policy. The responsibilities the U.S. military assumes in this area are likely to set the

regulation of military activities in space because these dispute settlement procedures could be used to curtail U.S. Navy operations. See Baker Spring, “[The United Nations Convention on the Law of the Sea](#),” testimony before the House Committee on International Relations, 12 May 2004.

³⁹For example, the military’s *Joint Doctrine for Space Operations* hardly mentions the military’s role in defending the interests and assets of private U.S. citizens operating in space. See Joint Chiefs of Staff, *Joint Doctrine for Space Operations*, Joint Publication 3-14, 9 August 2002.

standard for other nations. The inchoate process for regulating these activities at the international level will allow national militaries to establish the pattern of behavior that can win broad understanding and support.

***Recognize that Intelligence Activities
in Space are Becoming Less Dominant***

At the outset of the space age, intelligence activities dominated military activities in space. The inchoate process was particularly suited to this circumstance because much of this intelligence activity was presumed to be “extra legal” and beyond the reach of formal diplomacy.⁴⁰ Clearly, the dominance of intelligence activities in space is ebbing, and the direct military uses of space are coming to the fore. Nevertheless, the inchoate process for the international regulation of national security and military activities in space can continue to be effective even though more open military activities in space are becoming the more powerful driver.

Given the more open nature of presumably legal military activities, however, the pressure to adopt formal regulations at the international level will grow. On balance, giving in to this pressure will be unwise. The U.S. military, although in a somewhat different manner, will be able to take advantage of the flexibility inherent in the inchoate process, as the intelligence community has to date. This is not an argument in favor of the military adopting methods more in keeping with the intelligence community, but to recognize that the inherent flexibility in the inchoate process will provide the military wider opportunities to adapt to technological advances and international political developments in space.

⁴⁰R. Cargill Hall, “National Space Policy and the U.S. Military Space Program,” p. 2; and Gerald M. Steinberg, *Satellite Reconnaissance: The Role of Informal Bargaining* (New York: Praeger Publishers, 1983).

Focus on Facilitating the Conduct of Military Space Activities, Not Limiting Them

A key advantage of the inchoate process for regulating military activities in space is that it affords the U.S. military greater freedom of action. Many, however, view the process of regulating military activities in space predominantly as an arms control exercise.⁴¹ Arms control is designed to deprive national militaries of their freedom of action. On the other hand, not all international regulations, particularly those that are informal and observed as a matter of practice, limit freedom of action. For example, international regulation that establishes rights of passage will increase the military's freedom of action. Such regulations, generally speaking, are not products of an arms control process.

While space arms control can have a role in the international regulatory process, it should be pursued cautiously and applied narrowly. Generally speaking, the United States should be conscious of two things regarding space arms control: First, competitor states, recognizing the U.S. lead in military space capabilities, will attempt to use arms control to buy time and ultimately to catch up with the United States; and, second, a space arms control agreement will serve the national interest if it effectively blocks an unwelcome advancement by a competitor state while not denying the U.S. military a valuable capability.

From this perspective, a nonproliferation approach to space arms control is likely to be superior to comprehensive bans on certain weapons or systems. An effective nonproliferation policy, for example, could result in an approach that encourages states to abandon programs for deploying their own space systems in exchange for select services provided by U.S. systems. The access to such services would be curtailed if the services were used for

inappropriate purposes. Such a nonproliferation policy does not necessarily require formal treaties or agreements.

Consider that Space is Already "Weaponized"

Certain arms control advocates argue that if the United States takes certain steps, such as deploying space-based missile defense interceptors or anti-satellite weapons, it will be the first to weaponize space. This argument is based on the assumption that space is not now weaponized.⁴² Inconvenient for the proponents of this view is the fact that space was weaponized at the time the Germans launched the first V-2 rocket during World War II. The clever use of definitions, such as one that excludes ballistic missiles, is designed to make it appear that the United States will be acting in a provocative way if it takes these steps.

competitor states, recognizing the U.S. lead in military space capabilities, will attempt to use arms control to buy time

This line of reasoning is flawed. For example, it would assert that for the United States to defend its territory against a missile attack that has already been launched if the defensive interceptors are located in space is somehow provocative. By this logic, the initial launch of the missile attack by

a U.S. enemy is not provocative. The space-based defensive response is defined as unacceptably provocative. U.S. civilian and military leaders, under certain circumstances, must be prepared to explain to the public that the steps they are taking regarding military activities in space are reasonable and entirely in keeping with similar military actions in other contexts,

⁴¹Michael Krepon, *Space Assurance or Space Dominance?*

⁴²Jeffrey Lewis, "What If Space Were Weaponized? Possible Consequences for Crisis Scenarios," Center for Defense Information, 5 August 2004.

such as operations on land, at sea, and in the air. Otherwise, these leaders must be prepared to explain to the public, in the wake of an attack, why they did not utilize all available measures to defend the nation.

The Inchoate Process and the Path Ahead

The drive to regulate military activities in space at the international level is nothing new, and those concerned about strengthening U.S. military capabilities in space need not necessarily resist the effort in all instances. The key to whether specific international regulatory efforts contribute to or undermine the relative military advantage of the United States in space will depend on how and to what end these efforts are undertaken.

The United States has little to fear from an international regulatory process that is inchoate.

From a position of strength, the U.S. military can use this process to establish patterns of behavior that largely accommodate its mission requirements. On the other hand, the military has much to fear from formal agreements that include sweeping provisions.

On the positive side, the U.S. military is likely to find that certain international regulatory measures actually enhance its ability to achieve its aims. Achieving positive outcomes depends on the U.S. military’s understanding clearly what it aims to achieve in space and acting deliberately in achieving those aims. In most instances, and perhaps in spite of vocal opposition, other states are likely to accept those actions as a new standard of behavior governing the actions of all militaries in space. In the end, the U.S. military may find that the inchoate process for regulating military activities in space will help it to attain an as yet unrealized capability of mastering space. 