

Legality and Legitimacy: China's ASAT Test

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Two years have passed since China's anti-satellite (ASAT) test. Yet, the reverberations from that event continue to be felt. The shooting down of spy satellite USA-193 by the United States in early 2008, an action surmised by many as a reactionary show of force, has only heightened the sense of alarm for space security. Certainly, every nation takes such actions for a purpose. However, if we look at those events from a factual and legal standpoint, eliminating any guesswork about intent and purpose, they are both legal and legitimate. In short, they are not extraordinary.

International law has been the principle mechanism by which to regulate the relationship between countries. The legal standard of international law - which should be respected by national behavior - is mainly represented by international treaties and customs. There is a subtle but important difference between the two. International treaties have a binding force only to States Parties (signatory states), while having no benefits or liabilities to non-States Parties. International custom, on the other hand, binds all nations unless it clearly expresses an objection to the norm.

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What is and What Should Be

In legal theory, there is a clear distinction between *lex lata* (what the law is) as opposed to *lex ferenda* (what the law ought to be). *Lex lata* is the basis to determine the legality of an action. *Lex ferenda* is the basis to determine whether there should be more rational rule to further regulate an action. It recognizes that existing law contains many loopholes and incongruities and offers what might become “existing law” in the future. The two should not be mixed up. An action can be judged according to *lex ferenda*, but it should not be the basis of whether it is actually “legal” or “illegal.”

Therefore, the legality of one nation's action is judged principally according to international treaties and customs. Those nations' actions not violating the existing international treaty and customs are not illegal.

As we know, international space law was initiated in the 1950s, developed quickly in the 1960s and 1970s, and took shape in complete form by the end of the 1970s. This set of laws, including the Outer Space Treaty (1967), the Rescue Agreement (1968), the Space Liability Convention (1972), the Registration Convention (1975), and the Moon Treaty (1979), governed major space activities and had legal force.¹ There were some additional principles and declarations, but none with legal force.

These treaties established the principles, rules and system for space activity, encompassing the legal definition of outer space, the liabilities for those acting in space, the registration of space objects, the rescue of astronauts, and activities on the moon. These treaties have powerful effect within the international community based on their broad participation.² All the main countries engaged in space activity have signed up to most of these treaties, with the possible exception of the Moon Treaty, whose participation remains low at only 13 countries to date.³ The wide international acceptance of these treaties also serves as the evidence for customary law - to a degree - which gives force to the legal principles reflected even over non-States Parties.

As a major actor in space, China has acceded to all of the above treaties except for the Moon Treaty. That is consistent with all other dominant players in outer space, all of which have so far opted out of the Moon Treaty, including the United States - the only country that has landed on the moon to date.

Of the five treaties, the Outer Space Treaty (OST) is the oldest. The OST oversees the general principles and rules of the whole space legal system and plays a key role in judging whether the action of one country in outer space conforms to international law. According to the OST, China has the right to conduct an ASAT test and take out its own registered satellite in outer space.⁴ This right applies not only to China, but any other state under the same conditions.

THE RIGHT OF DISPOSAL

According to Article VIII of the OST, a state registering the launch of an outer space object “retains jurisdiction and control” over such object whether it is located in outer space or on a celestial body.⁵ The ownership of the space object is not af-

fectured by its presence in outer space or on a celestial body, or by its return to the earth. The ownership includes the space object as well as the component parts of the object. Furthermore, ownership remains unchanged for any object and its component parts which are landed or constructed on a celestial body.⁶

If a state has ownership of a space object, that state undoubtedly can exert its full rights on the object. Rights of ownership generally include possession, use, profits and disposal. The latter entails the legal right to dispose of the object as well as transfer ownership to another. The right of disposal has always been taken to be the fundamental symbol of ownership. In addition, the nature of ownership is a real right - a right attached to movable property - that nobody can harm the rights on the object of the owner.⁷ Hence all states can retain the right of disposal, including the destruction of the space object it owns and using means not excluding the method of ASAT test.

Thus, regarding China's decision to destroy one of its own satellites, a space object that was China's property, it had every right to dispose of it. China was merely exercising its right of disposal, and no other state, organization or individual should intervene and obstruct China's actions. Moreover, China's action did not infringe on anyone's rights and interests and caused no material damage or personal injury to any other state, organization or individual. Therefore, the opposition to that action has no legal basis.

NO BANS IN SPACE

To just vaguely state that space law prohibits weapons testing, without a detailed analysis of the rules on weapon testing is not only imprecise, but also a serious misreading of the existing treaty regulations. In fact, the relevant regulations in space law do not ban all the weapon tests.

According to Article IV of the OST, which discusses the issue of weapons, "State Parties to the Treaty undertake not to place in orbit around the Earth any objects carrying nuclear weapons or any other kinds of weapons of mass destruction, install such weapons on celestial bodies, or station such weapons in outer space in any other manner" and that "the establishment of military bases, installations and fortifications, the testing of any type of weapons and the conduct of military manoeuvres on celestial bodies shall be forbidden." It is explicitly mentioned that the forbidden area for weapons testing is "on celestial bodies" rather than in orbit around the earth. The weapons not allowed "in orbit around the Earth" are "any objects carrying nuclear weapons or any other kinds of weapons of mass destruction."⁸ This shows that a missile launch to destroy one's own object in space is not forbidden by international space law.

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The ASAT tests carried out by China and the United States, respectively in Janu-

ary 2007 and February 2008, were both attacks on satellites in orbit, not weapons tests on the moon or other celestial bodies. They did not violate the relative regulations of the international space law.

FREEDOM TO EXPLORE AND UTILIZE OUTER SPACE

Article I of the OST made clear that the exploration and use of outer space, including the Moon and other celestial bodies, “shall be carried out for the benefit, and in the interests of all countries, irrespective of their degree of economic or scientific development, and shall be the province of all mankind.” Second, “there shall be free access to all areas of celestial bodies.”⁹ In other words, space is not only open to utilize, but available to anyone, without discrimination. The exploration and use of outer space is not the right of any one country but the province of all mankind. China has a right to space equal to that of the United States. Developing countries have the right as well as developed countries; the East as well as the West. Naturally, the exploration and use of outer space should be for the sake of the welfare and interests of all the states, irrespective of their degree of economic or scientific development.¹⁰

The exploration and use of outer space certainly includes various tests that are permitted, providing they are in accordance with international law.¹¹ Certainly, a state should bear international liability if its act causes injury to another state, even if the act is not prohibited by international law. The injured party can claim its own right to seek remedy according to international law.

Article IX of the OST also mentions the issue of testing in space. It stipulates that the State Party states shall undertake appropriate international consultations before proceeding with any “activity or experiment planned by it or its nationals” in outer space if a state has reason to believe that such activity or test would cause potentially harmful interference with the activities of other states.¹² From this article, we can see that even outer space activity or a test by one State Party might cause harmful

intervention to the peaceful exploration and use of outer space. OST does not prohibit such activity, but allows the related State Party the right to put forward a request for consultation. The result of the consultation is not stipulated in the article. OST proclaims in the article that the State Party should avoid the “harmful contamination and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter” and, where necessary, shall adopt “appropriate measures for this purpose” in their pursuit of the study of outer space, including the Moon and other celestial bodies.¹³

From Article IX, some will naturally take the position that in the case of an ASAT test, “appropriate consultation” with others is required before proceeding since it may cause “harmful contamination” of the space environment and, hence, “harmful interference” with activities of other State Parties. This is reasonable, but in international law to date, “harmful contamination” has no explicit definition. The concept

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needs to be clarified by State Parties. There is not even a proposal in the UN Assembly to do so. It is a matter that is currently decided only by practice. An interpretation of what "harmful contamination" means in the abstract may very well lead to different conclusions by different people, all of which may be reasonable. Within such interpretations, the scope of "harmful contamination" may only include the testing of weapons of mass destruction, or it may cover a long list of items including a discarded component of a space object. Strictly speaking, we may not be able to precisely determine which human activities in space constitute "harmful contamination." Thus, to categorize ASAT and related activities, the international community must specifically define this term.

Furthermore, the right to judge whether a country's space activity constitutes "harmful interference" as described in Article IX is granted to the State Party engaged in the activity. Only if that state considers its space activity may entail "harmful interference" is it required to consult with others "before proceeding with any such activity or experiment." Of course, if another State Party believes an activity in space "would cause potentially harmful interference with activities in the peaceful exploration and use of outer space," it is free to request consultation.

THE LEGITIMACY OF THE ASAT TEST

China's ASAT test did not violate international law. In fact, the test was not only legitimate but rational. As to the first point, the basic foundation of legitimacy is the principle of national sovereignty. National sovereignty means that each state has the right to constitute its own space policy and conduct itself by that set of policies (including aspects of national defense), as long as it does not violate international law. National sovereignty is a fundamental principle clearly recognized by international law and is the basic code of conduct for international relations. International law acknowledges the sovereignty of each state, which means that one's own conduct is decided independently, and shall not be subject to the command or control of another state unless the sovereign state agrees to submit itself to another.

Regarding space, a state can independently decide whether or not to launch a space object, what its function will be, the timing of the launch and the disposal of the space object, among other factors. Any intervention in these matters that fall under the scope of national sovereignty is a violation of the principle of non-interference of internal affairs.¹⁴

As regulated by international law, the exploration and use of outer space shall be carried out for the benefit of, and in the interest of, all countries.¹⁵ This includes the benefits and interests of the country engaged in that space activity. In other words, a country that carries out a space activity with the consideration of its own interests, and without damage to other countries, does not violate the spirit of international space law, as long as its benefits and interests do not conflict with the benefits and interests of all other countries.

Therefore, a nation's space policies and pursuits are done in the interest of all

countries but are necessarily also conducted out of national self-interest. A state's interests inevitably entail national defense. In fact, national defense considerations are often a priority. US behavior is a prime example. President George W. Bush signed the new "US National Space Policy" in 2006, which stated that the United States will "deny, if necessary, adversaries the use of space capabilities hostile to US national interests."

Secondly, the principle of sovereign equality means that each country has an equal right to exercise its sovereignty, to protect its own interests, and to explore and exploit outer space. Factors such as the size, power and economic development of a country have no bearing on a nation's rights. The principle of sovereign equality is completely non-discriminatory and simply calls for equal status in the international community. How can one country forbid another its right to protect its own national interests? If one state - even one with a developed economy and great military power - claims its right to conduct ASAT tests and has been doing so for a long time, for what reason or excuse can it forbid a developing country to do the same?

The United States was both the first country to test an ASAT weapon and the country that has done it the most times. In fact, the control of space was established as US policy long ago. Furthermore, America's activity in space also supports this goal.

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In the last century, President Johnson stated in public, "Control of space means control of the world."¹⁶ From the 1950s through the mid-1970s, a key US program was the anti-ballistic missile defense system, which was used to develop and test anti-satellite technology with roughly 40 ASAT technical tests carried out.¹⁷ Then, in June 2002, the United States formally quit the Anti-Ballistic Missile (ABM) treaty, which relieved it of remaining restrictions on further testing and deployment of space weapons.

On the other hand, China has made only one such test. Therefore, an interesting conclusion can be drawn if one compares the loud denunciation of China's single test by the country that has conducted many such tests. Those that test much are not condemned, while those that occasionally test are condemned. This contradiction has the negative consequence that countries with the ability to test an ASAT will execute many as soon as possible. Sure enough, soon after the USA-193 ASAT test, the former Indian President Dr. Avul Pakir Jainulabdeen Abdul Kalam declared that India had the capacity to hit an object in outer space.¹⁸

From another perspective, one can even see that China's ASAT test was rational and there was no alternative for the Chinese government. China has long attempted to avoid an arms race in outer space. The international community has vociferously called for the restriction of outer space arms development. At the Conference on Disarmament in 2000 and 2001, Russia and China put forward a draft plan for the prevention of an outer space arms race, which was opposed by the United States.¹⁹

Following repeated US refusals to consider such an international treaty for over a dozen years and under the grave circumstances of continuing US arms sales to Taiwan over the same period, it is not surprising that Chinese analysts have concluded that China was forced to develop the ASAT test to strengthen its national security and break US hegemony in space.²⁰

NOT ONE, BUT TWO, THREE...?

It follows, then, that one ASAT test may not have been sufficient to affirm China's right to take out its own registered satellite. If necessary, China may need to do so two or three times. In fact, this is very possible. If no one can be sure that the hit against the USA-193 satellite in 2008 was the last US ASAT test, then there is no reason to believe that China's test was its last either. The only question is the choice of method. Judging by the current development of US ASAT weapons, missiles, high energy laser weapons, particle beam weapons, microwave weapons and microsattelites are all effective ways to destroy a satellite.²¹ They might also be the methods that China adopts.

In international law, a country's "practice" is the premise that forms international custom, which has legal binding force. National practice and *opinion juris* (opinion of law) are the two components of international custom. Only with the existence of national practice can the legal force (*opinion juris*), which is reflected in the practice, be affirmed. At the present time, there is no prohibition regarding ASAT tests in the body of space law. Thus, if a country makes clear its position, repeatedly expressed through its behavior, a rule may be established or affirmed in this way. Such as, it is legal for a country to actively destroy its own space object. Of course, this would not be a new rule, rather just a clear confirmation of an existing practice.

Affirming an existing rule in this way (through one's own practice and behavior) is not unique in the history of international law. In the 1940s, the International Court of Justice (ICJ) heard the Corfu Channel case, where a British warship claimed its right of innocent passage through the Corfu Channel and confirmed the rule through its activity of doing so. The ICJ confirmed the right of the British warship in the judgment even though Albania opposed that right. Later, in 1982, the United Nations Convention on the Law of the Sea clearly stipulated the right of passage in the language of treaty regulations.²² As with this example, once a rule is established or expressly confirmed, there is no more room for further comment. Even if there was criticism, it would be meaningless in a legal sense.

Throughout the evolution of international law, there was no obstacle to countries who chose to oppose certain decisions through their behavior in order to establish a contradictory international custom. Alternatively, a country can also choose not to object to the action in principle, but rather make detailed, restrictive rules on how to carry out such activity. For example, it was stated in the UN Space Debris Mitigation Guidelines that "when intentional break-ups are necessary, they should be conduct-

ed at sufficiently low altitudes to limit the orbital lifetime of resulting fragments.”²³

LEX FERENDA: NORMS ON SPACE DEBRIS

Could China's ASAT test cause any international liability problems? At present, the answer is no. The issue of liability resulting from space activity is regulated under the Liability Convention. Accordingly, liability only applies when the space object causes damage to any person or object on the surface of the Earth, or any object or person in space of another country. If China's ASAT test caused any damage to another country, for instance, if a debris fragment damages the space object of another country, such as a satellite, then China should bear the appropriate liability. China's ASAT test, however, has caused no such damage and hence bears no direct liability.

What if a piece of debris resulting from the ASAT test causes damage in the future? Again, the above applies: 1) whether persons or property on the surface of the Earth (or aircraft in flight) are damaged, or 2) whether the space object or persons aboard the space object of another country are damaged. According to the Liability Convention, “strict liability” should be applied to the former and “fault liability” to the latter.²⁴ Taking fault liability as an example, since this is most relevant to the subject at hand, even if a debris fragment harms the space object of another country, liability depends completely on whether the defendant was negligent (at fault). With negligence, the plaintiff has to prove that the defendant knew, or should have known, its actions would lead to harm. In other words, the harm may have also been caused by the plaintiff if it incorrectly operated or failed to control its space object, resulting in a collision with the fragment. In this case, the damage is caused by the operator of the satellite and the defendant bears no liability. In fact, the liability for damage by collision lies both with the owner of the space object and the space debris, and the owner of either may bear strict liability or fault liability. Thus, a functional space object that collided with a piece of debris may in fact also be found liable itself.

Regarding debris produced by an active strike against a satellite, a space debris mitigation guideline was established some time ago, and was resubmitted in the report by the Outer Space Committee in 2007. It proposed the avoidance of intentional self-destruction. However, the guideline has no legal binding force and constitutes no legal obligation.²⁵ Actually, debris mitigation is not a real solution to the problem. Only debris elimination will be effective. Currently, some countries have completed the conceptual design of capturing debris in space.²⁶ But there is no effective way to remove debris due to the high cost of working in space.

Space debris will increase concurrently with the rise of activity in space. Left unattended, the possible result may be that no country can launch a single object into space. What is the best solution? One possible way is to set up a common fund with the investment of all countries to offset the enormous cost of cleaning up space, and allotting the resulting freed up orbits to participating countries. However, this idea can only be realized when the value of using the orbit exceeds the cost of space debris clean up, which is not a likely prospect for some time to come.

By way of sober conclusion, ASAT tests are legal according to current international law. Therefore, the global community should focus on how to further standardize the detailed rules on space debris and ASAT testing. These measures are very feasible. The concern over the threat of one ASAT test by China by other countries not only exaggerates unnecessarily the impact of the test, but also moves the solution in the wrong direction. ☹️

NOTES

¹ The Outer Space Treaty, formally known as the “Treaty on Principles Governing the Activities of States in the Exploration and Use of Outer Space, including the Moon and Other Celestial Bodies.” “The Agreement on the Rescue of Astronauts, the Return of Astronauts and the Return of Objects Launched into Outer Space,” also referred to as the Rescue Agreement. The “Convention on International Liability for Damage Caused by Space Objects,” also known as the Space Liability Convention. The “Convention on Registration of Launched Objects into Outer Space,” also known as the Registration Convention. “The Agreement Governing the Activities of States on the Moon and Other Celestial Bodies,” better known as the Moon Treaty or Moon Agreement.

² By the beginning of 2008, signatories to the OST reached 98, with 27 new states signing on; the Rescue Agreement reached 90, with 24 new signatories; the Liability Treaty reached 86, with 24 new; and the Registration Convention reached 51, with four new signatories.

³ Refer to UN document A/AC.105/917.

⁴ Refer to Article VIII of the Outer Space Treaty, <http://www.unoosa.org/oosa/SpaceLaw/outerspt.html>.

⁵ Ibid.

⁶ Ibid.

⁷ Real rights are rights that include ownership, use, pledge, usufruct, mortgage and predial servitude.

⁸ Refer to Article IV of the Treaty.

⁹ Refer to Article I of the Treaty.

¹⁰ See Article I of the Treaty: “...shall be carried out for the benefit and in the interests of all countries, irrespective of their degree of economic or scientific development...”

¹¹ Ibid, “... shall be free for exploration and use by all States without discrimination of any kind, on a basis of equality and in accordance with international law...”

¹² The article regulates: “...a State Party to the Treaty which has reason to believe that an activity or experiment planned by another State Party in outer space, including the Moon and other celestial bodies, would cause potentially harmful interference with activities in the peaceful exploration and use of outer space, including the Moon and other celestial bodies, may request consultation concerning the activity or experiment.”

¹³ Refer to Article IX of 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 and also adverse changes in the environment of the Earth resulting from the introduction of extraterrestrial matter and, where necessary, shall adopt

appropriate measures for this purpose....”

¹⁴ Of course the selection of the exact time is based on scientific calculation.

¹⁵ Article I of the OST.

¹⁶ Alan Wasser, “LBJ’s Space Race: What We Didn’t Know Then,” *The Space Review*, June 20, 2005, <http://www.thespacereview.com/article/396/1>.

¹⁷ Yuan Lin, “Uncover the Secret of ASAT Weapon,” *China News Weekly* 5, 2007, 63. “In 1976, the US Air Force began to develop a direct-ascend kinetic energy anti-satellite weapon system launched from space. On Sep. 13, 1985, the first flight test of a satellite interception was carried out, which successfully intercepted a discarded P78-1 test satellite on the 550 kilometer orbit. The campaign height of the interceptor is below 1,000 kilometers. The comparative speed to approach the target is 10-14 km/s.”

¹⁸ See <http://news.cctv.com/world/20080225/104518.shtml> (in Chinese).

¹⁹ Yuan Lin, “Uncover the Secret of ASAT Weapon,” *China News Weekly* 5, 2007, 62.

²⁰ Shen Dingli, “Expert: China was forced to do ASAT test purely for the breaking of the US space hegemony,” May 30, 2007, www.renmin.com.

²¹ Wu Qin and Gao Yanling, “New Development of US ASAT Weapon,” *International Space* 4, 2007, 22-23. Jin Xin, Bi Yiming and Fang Qin, “Studies of Relative Issues of ASAT Weapon Development,” *Astronautic Electronic Confront* 24, no. 3, 13-15.

²² Refer to the judgment of the Corfu Channel Case by the International Court of Justice, 27-33. See UN Convention on the Law of Sea.

²³ Refer to UN document A/AC.105/890.

²⁴ These terms are referred to in Article II and III of the Liability Convention.

Article II, “A launching State shall be absolutely liable to pay compensation for damage caused by its space object on the surface of the earth or to aircraft flight.”

Article III, “In the event of damage being caused elsewhere than on the surface of the earth to a space object of one launching State or to persons or property on board such a space object by a space object of another launching State, the latter shall be liable only if the damage is due to its fault or the fault of persons for whom it is responsible.”

“Strict liability, sometimes called absolute liability, is the legal responsibility for damages, or injury, even if the person found strictly liable was not at fault or negligent.” Fault liability is based on negligence and applies to harms occurring in outer space. In strict liability, fault is irrelevant and applies to aircraft in flight and on Earth. With negligence the plaintiff has to prove that the defendant knew, or should have known his/her/its actions would lead to harm. With strict liability, the plaintiff only has to prove that he/she/it was injured and that it was the defendant’s object that caused the harm. Strict liability is a lower standard of proof and even if the defendant did nothing wrong, and did everything perfectly, he/she/it will still be held responsible for the harm.

²⁵ See UN document A/AC.105/720 in 1999, A/AC.105/C.1/L.260 in 2002 and A/AC.105/890 in 2007.

²⁶ Refer to UN document A/AC.105/888.