Topic 4:

How can rules designed to distinguish and separate civilian and military activities in the air and sea domains apply to mitigate security challenges in outer space?

I’d like to thank the Chair and the Secretariat, as well as all of the distinguished delegates for inviting us to address, “Applicable elements of the legal regimes governing aviation and the sea.” Specifically, I’ll be addressing, “How rules designed to distinguish and separate civilian and military activities in the air and sea domains can apply to mitigate security challenges in outer space.” And, as I believe my colleague will be discussing, for the most part, law of the sea, I’ll touch on some of those rules but focus my comments mainly on international air law.

Over the past several days, we’ve heard over and over that international law applies to outer space activities as is recognized by Article III of the Outer Space Treaty. Given that we’re discussing distinct legal ‘regimes’ for the air, sea and space, I will briefly raise a few points on the notion of legal regimes, which was addressed by the International Law Commission in its report on fragmentation.

The ILC noted that compartmentalizing international law into subject-specific areas, or regimes, should be viewed as a means of organizing international law to better and more easily understand and articulate it. However, when States undertake activities in any domain, they should examine the whole of international law to see what provisions are applicable. States cannot opt in and opt out of rules or regimes simply by classifying an activity as something of the air, or of the sea or even of outer space. It is the nature of the activity that is important.

However, many of the laws that should be examined carry language on their face that limits their applicability, language that specifies the object to be regulated, or the domain of activity wherein a particular rule applies – language such as, ‘vessel’ or ‘aircraft’ or ‘space object’ or ‘on the high seas’ or ‘in outer space’. And even where a particular rule does not specify an object, an activity or a geographic domain, the rule’s context within a treaty can inform on the issue of the applicability of a rule.

Yet, we see one regime applying to another domain with the Convention on the Law of the Sea. For example, although the Chicago Convention recognizes States’ exclusive sovereignty over national airspace, we must look to the Law of the Sea for the proposition that States have sovereignty in the airspace over their territorial waters (Art. 2) and that aircraft enjoy freedom of overflight over the
high seas (Art. 87). UNCLOS even provides that aircraft must obey the Rules of the Air established by ICAO.

So, States should examine the various regimes of international law to determine what provisions are applicable to activities in outer space, but the fact is that I don't think there are any in the Law of the Sea or International Air Law that would be directly applicable to activities on orbit. Nevertheless, in one of the earliest legal dissertations on aviation law way back in 1910 (Lycklama à Nijeholt), the questions was posed: “For why do we compare?” And the answer provided was, “To find cases where existing rules can be applied, to lighten the work of lawmakers. And in the air, there will certainly be cases where maritime rules apply.”

What we are doing here today is largely comparative analysis to identify underlying principles in the law of the sea and aviation law that might be employed by States to mitigate security challenges in outer space. I'll begin with an example of a principle that applies across domains and then discuss challenges with applying some principles to activities in outer space.

As an example of a cross-domain principle, let’s consider the legal link that States maintain with objects sent into international domains. At the most basic level, there are commonalities between the high seas, international air space and outer space – they are all geographic domains in which States have no territory. Which means that States have no sovereignty over those domains and must put into place mechanism for maintaining jurisdiction and control over the objects that travel from their territory into one of those international domains.

I think we’re all familiar with these. On the high seas, that mechanism is a flag which confers nationality on vessels. Over the high seas, the mechanism is a registration regime that confers nationality on aircraft. While the Outer Space Treaty and Registration Convention recognize and even mandate that a State maintains jurisdiction and control over space objects, we would be hard pressed to characterize that legal link as the conferral of nationality on the object. Nevertheless, the effects are similar – for vessels at sea, for aircraft over the high seas, and for space objects, States maintain jurisdiction if appropriate formalities are met and then, in turn, those States’ domestic laws apply on board. So, in some instances, underlying principles of one regime are commensurate with those of another regime.

There is a feature of the Chicago Convention that distinguishes it from the Convention on the Law of the Sea. Both UNCLOS and the treaties on space law have provisions that are directly applicable to governmental and non-governmental activities. Using our example of a legal link between States and their objects operating in international domains, the rules for flags on vessels at sea and for registration of space objects apply both to civil and military craft.

The Chicago Convention, on the other hand, applies only to civil aircraft – the Convention by its own terms does not apply State aircraft. The term ‘State’ is broader than the term ‘military’ and includes all government operated aircraft. In this sense, the Chicago Convention is similar to the 1974 International Convention for Safety of Life at Sea or SOLAS, which does not apply to
warships. The raison d’être for both conventions is safety of human life. Both have highly technical aspects that deal with things like certification of equipment and crew, and inspections of vessels and aircraft for safety.

Likewise, the Chicago Convention resembles the 1972 Convention on the International Regulations for Preventing Collisions at Sea, known as the COLREGs, in that both conventions contain rules for safety of navigation. Rules for the Air are contained in Annex 2 to the Chicago Convention, which were created and updated by ICAO. Similarly, the COLREGs are regulations annexed to the 1972 Convention for the Preventing Collisions at Sea. Unlike the Chicago Convention, the COLREGs apply to all types of vessels, governmental and nongovernmental.

There is one important caveat to the statement that the Chicago Convention does not apply to State aircraft. That caveat pertains to the obligation of due regard.

The obligation of due regard, as reflected in Article IX of the Outer Space Treaty, has been a focus of discussion in these meetings over the past few days. Prof. Aoki has already provided a very helpful exposition on it and mentioned that it too appears in the Chicago Convention, but I thought I might elaborate on the principle as employed in international aviation law in the hope that it can illuminate the principle in a manner that will benefit delegates in consideration of the meaning of due regard for space activities.

The obligation of due regard is found in Article 3 of the Chicago Convention, which states, “The contracting States undertake when issuing regulations for their State aircraft, that they will have due regard for the safety of navigation of civil aircraft.” This is the only time the phrase appears in the Chicago Convention, which begs the question as to whether there is a due regard obligation for civil aircraft. It seems strange that the drafters would obligate States but not their subjects to provide due regard. But the Convention elaborates many other rules for civil aviation and augments those rules by detailed provisions in its annexes. It may be that the totality of those rules embodies what we should consider to be due regard for civil aviation.

In another instance of the applicability of UNCLOS to aviation, Article 39 states that, “[S]tate aircraft will normally comply with [ICAO] safety measures and will at all times operate with due regard for the safety of navigation.” We see in this provision both soft and hard obligations – first calling on State aircraft to comply with ICAO safety measures while recognizing that they cannot always do so, but also obligating State aircraft at all times to operate with due regard for the safety of navigation.

Through a resolution (ICAO Resolution 38/12) on ‘Coordination and cooperation of civil and military traffic’, ICAO has elaborated this relationship between adherence to its safety procedures and the obligation of due regard. The ICAO General Assembly resolved that States shall ensure that, to the extent practicable, military operations will comply with the rules of the air set forth in Chicago Convention Annex 2.
And in other advisory documents (ICAO Doc 4444), ICAO iterated this recognition that military operations sometime necessitate non-compliance with air traffic procedures, but called upon States, whenever practicable, to notify the proper air traffic control unit prior to undertaking such maneuvers.

Thus, rules for civil aviation serve as a means for States to measure their military activities to ensure safety of navigation and the due regard principle serves as a backstop – a threshold below which military activities shall not fall. Due regard also appears as relative concept; its meaning can change depending on circumstances, including a balancing of the rights and obligations of States.

Many features of space activities make it difficult to translate principles from air law and sea law to outer space activities. Both technical challenges and political misgivings have prevented States from creating either rules for space traffic or a specialized agency to craft such rules. Progress in the development of rules at air and sea has come largely to mitigate human casualties. The sad fact is that States typically are spurred to action when people lose their lives. Because satellites are for the most part uncrewed, information collection and/or distribution devices, the same impetuses do not exist for creating navigational rules, which can lead to transparency and confidence between States and to clarity on principles like due regard.

To some extent, the ITU fills that role. Its coordination of the GEO stationary orbital slots, including separation of satellites to safe distances, might be seen as proto-navigational regulation. But, such rules do not exist for non-geostationary satellites. Rather, state practice is developing through risk-tolerance evaluations of probabilities of conjunctions. Navigational regulations like Annex 2 of the Chicago Convention and the COLREGs simply don’t exist and the principle of due regard as exercised in international aviation is in many ways not commensurate to due regard for space activities.

That said, I remain optimistic that the dramatic increase in spacefaring States, emerging spacefaring States and non-governmental operators in space, and the incumbent increase in economic and humanitarian benefits that can be achieved through more actors and activities in space, can have a positive impact on endeavors to identify norms, rules and principles of responsible behavior. More actors and more activities mean more data and more State practice on responsible behavior. By identifying what responsible behavior is, it may be easier to say what isn’t responsible. The history of both the Law of the Sea and the Chicago Convention is indicative of these trends.

First, on the Law of Sea. I wish I could claim this idea, but I came across it in the writings of Peter Singer, formerly a senior fellow at the Brookings Institute, in writing on cyber war and State supported cyber hacking. If you exam the writings of Emer de Vattel from the mid-1700s, you’ll note that privateering – effectively the use of merchant and other commercial vessels to conduct piracy – was not only legal, in his opinion, but an economic and preferably way for States to achieve military objectives. Within the following hundred years, State changed their attitudes
toward both piracy and privateering, making both illegal. What happened? States saw greater economic benefit in keeping sea lanes open for trade. Thus, the potential exists that as more and more States and their citizens experience the incredible economic and humanitarian benefits of space applications, the less contested space may become. I’m afraid that this idea does not assist you all in addressing the very real and very urgent issues that we face with preventing an arms race in outer space, but perhaps another example might assist.

When the Chicago Convention was negotiated in 1944, aircraft were the most lethal weapons delivery systems on the planet. This sentiment endured into the space age as is evidenced by the travaux préparatoires for the establishment of the Ad Hoc COPUOS in 1958. During the negotiations over COPUOS’ mandate, US aircraft on military bases in Europe became a point of contention. Some States conditioned the establishment of a space committee on that committee also having the mandate to deal with disarmament issues. As we know, ultimately, COPUOS was established with the mandate to deal with ‘peaceful’ uses rather than with disarmament issues, but I digress.

In what might be considered a confidence building measure, States came together to create rules for what was in 1944 the most lethal dual-use device, the aircraft. Not all States were on board with that initiative but as the benefits of international civil aviation became manifest, the Chicago Convention steadily achieved universal acceptance, with now 193 contracting parties.

Thus, I strongly support the comments of Prof. Koplow on distinguishing and separating civil and military space objects, but for different reasons. The Chicago Convention’s application to only civil aircraft allowed a industry to flourish. Respectfully, many of the honorable delegates to this meeting raised concerns over both the economics and technical feasibility of distinguishing and separating civil and military space objects, but I think there are ways to mitigate those concerns and that it’s a question of policy as to whether States want to pursue that route. Law and regulation and comparative legal analyses to other domains can assist with solutions.