IDA

Norms of Behavior in Space: Summary of Key Takeaways

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IDA Forum:

Norms of Behavior in Space
Summary of Key Takeaways

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A. Background

On April 20, 2022, the Institute for Defense Analyses (IDA) hosted a forum on Norms of Behavior in Space bringing together roughly 75 space experts from the U.S. military, civil, and commercial sectors to discuss norms of behavior in space. This included conversations on mechanisms for norm development and the roles norms play in an increasingly contested and congested environment. The forum was held under the Chatham House Rule. Participants presented and discussed issues through a series of keynote speeches and moderated panels followed by questions from attendees.

Notably, speakers defined *norm* differently. Forum organizers framed norms of behavior as "a perceived standard of appropriate behavior." However, more than one speaker defined *norm* as "the standard of appropriate behavior for actors of a particular identity." Participants generally described norms as sub-legal mechanisms that might become legally binding statutes. Some participants described norms as purely sub-legal mechanisms, while others included national policy, agreements, and treaties within a *norm's* scope.

B. Key Takeaways

1. Movement towards a New Norm: The U.S. Commitment to Not Conduct Destructive Direct Ascent Anti–Satellite (DA–ASAT) Missile Tests

The IDA Norms of Behavior in Space Forum coincided with the U.S. Vice President's April 18, 2022, announcement that "the United States commits not to conduct destructive, direct-ascent (DA) anti-satellite (ASAT) missile testing…to establish this as a new international norm for responsible behavior in
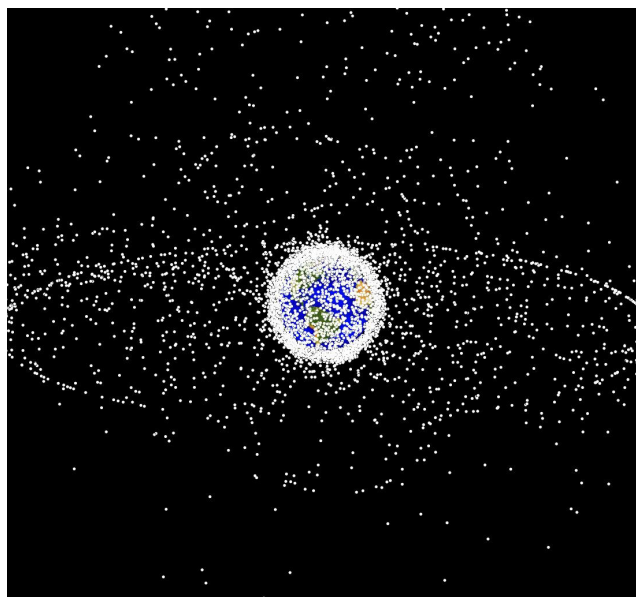
space."[1] Attendees asserted that the Vice President's announcement demonstrated U.S. leadership in promoting space norms and would likely spur discussion on this topic at the United Nations (UN) Open Ended Working Group on Reducing Space Threats.[2] This commitment to eliminate destructive DA-ASAT missile tests was viewed as a quick-win all countries could adopt in order to enhance space sustainability and security. Several participants commented that this norm required significant U.S. interagency collaboration to ensure the precise formulation was in line with U. S. Government commitments.

Participants believed the announcement was well received by U.S. allies and partners. They hoped the U.S. commitment would lead to widespread recognition that DA-ASAT missile tests are irresponsible actions that create long-term environmental and operational risk. There was general agreement that garnering domestic support for proposed norms would be easier than obtaining widespread international support without a domestic

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1   For more information, see: https://www.whitehouse.gov/briefing-room/statements-releases/2022/04/18/fact-sheet-vice-president-harris-advances-national-security-norms-in-space/

2   For more information, see: https://meetings.unoda.org/meeting/oewg-space-2022/

commitment. Many hoped this commitment to stop DA-ASAT missile testing could be promoted and strengthened by other major spacefaring states, while still preserving the right of self-defense. As more countries commit to refrain from DA-ASAT missile tests, participants believed, the cost of breaking a global custom could exceed the benefit that countries derive from testing these destructive weapons. Some attendees pointed out that Russia and China have critiqued the U.S. announcement, while other attendees said that since 2007 China has adhered to the non-destructive DA-ASAT missile test norm. Many agreed the announcement serves the interests of all space-faring states.

2.   The Norm Development Process

Presenters encouraged the United States to continue leading international discussions on norms promoting responsible and sustainable activities in space. Many believed that the Vice President's announcement demonstrated a first step all countries can take to ensure space sustainability. Participants said the goal is to encourage other countries to support a ban on DA-ASAT missile testing without experiencing the political deadlock that has obstructed treaties. Many agreed that UN space organizations are experiencing gridlock between coalitions, one led by the United States and the European Union, the other led by Russia and China. Several participants thought smaller agreements could build momentum for a larger agreement. Many participants highlighted the U.S. Secretary of Defense's Memo, *Tenets for Responsible Behavior in Space*[3] as another U.S. Government effort to create space norms. Participants also pointed to an example of a more mature norm-building effort: the U.S. Artemis Accords, a coalition of 18 countries,[4] originating with the United

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3   Tenets available at: https://media.defense.gov/2021/Jul/23/2002809598/-1/-1/0/TENETS-OF-RESPONSIBLE-BEHAVIOR-IN-SPACE.PDF

4   Singapore became the 18th nation to sign the Artemis Accords on March 28, 2022. For more information, see: https://www.state.gov/republic-of-singapore-signs-the-artemis-accords/.

States, which continues to grow and shape global understandings of international space governance.

Several participants advocated for incrementally developing norms, starting with small changes to build momentum eventually affecting internationally accepted behaviors. One speaker commented that to build momentum, a country needs to shape public opinion. Public opinion can give rise to institutional changes, which can affect national changes and can influence how other countries behave. Another participant noted that norms are often only encoded into treaties when they represent a practice that is already agreed upon by a significant number of countries. The participants believed that building widely accepted international norms might begin with officials publicly condemning bad behavior and educating the public on the challenges countries face in space.

Participants discussed the importance of framing and careful consideration for language and context, when discussing norms with other nations. Attendees commented that government officials should use the language from widely accepted agreements and establish a common lexicon that builds legitimacy for the norm. Widely accepted terms could familiarize other nations with how the norm fits in the context of other statements and agreements. One speaker mentioned that some countries, including Iran, believe norms proposed by the United States restrict other countries' capabilities after the United States has already developed and demonstrated those same capabilities. Other participants countered this point by stating that space sustainability is valuable to all nations. Participants pointed out that U.S. relations with Russia and China have deteriorated after Russia's invasion of Ukraine, pandemic restrictions, and U.S. restrictions on collaborating with China on aerospace work. Under these conditions, any conversation between the United States and Russia or China regarding space norms will need to consider the many points of tension between these countries in other domains.

Finally, several participants mentioned that the U.S. Government needs to engage with commercial actors to develop and foster norms of behavior for space, as norms should enable and protect commercial investment. Commercial entities have the ability to affect users in the space domain as they operate the majority of space assets. Participants from the commercial sector pointed out the value of dialogue between industry and government. Commercial representatives also pointed to several other fora, such as the Space Safety Coalition, the Consortium for Execution of Rendezvous and Servicing Operations (CONFERS), and the Plan European Roadmap and Activities for Space Exploration of Robotics and Autonomy (PERASPERA), where commercial actors engage with government representatives in developing best practices and standards promotion.

3.   Verification, Validation, and Legitimacy of a Norm

Several presenters discussed the importance of verification, validation, and legitimacy in the norm development process. Speakers indicated that the United States is receptive to possible legal agreements, but only if they are equitable, verifiable, and in the security interests of the United States and its
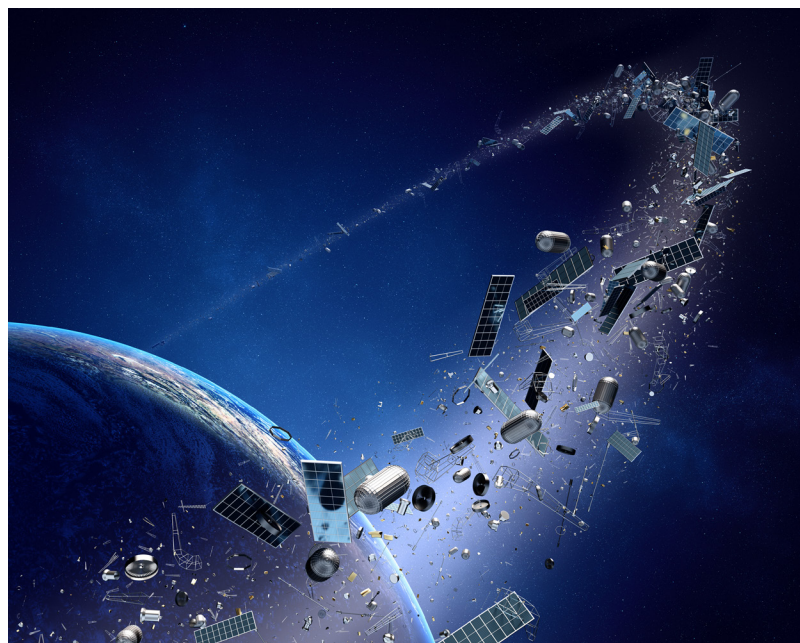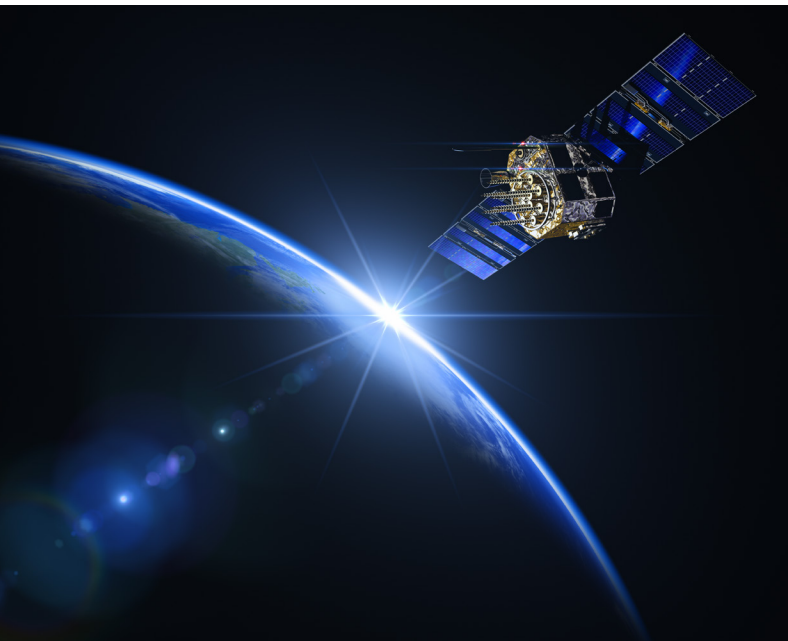
allies and partners. Further, speakers stated that for a norm to become a legal precedent, it needs to be verifiable. Several participants noted specific norms are preferred to broad ones because expected behavior is clearer. A specific norm should have fewer loopholes than a broad norm, and it should be easier to verify compliance. Verifiable adherence to a norm validates the norm over time and as more countries adhere to the norm, it gains legitimacy. The recent ASAT commitment not to conduct DA-ASAT missile testing aligns with this idea of verifiability because "tests" are easily observed and easier to verify and attribute, when compared to other forms of ASAT weapons. The ability to distinguish between adherence and noncompliance is necessary for enforcement. Countries react cautiously to vague language because they fear it might not meet verifiable standards and not deter improper behavior. Specific language in commitments is perceived as difficult to circumvent. Countries want to ensure that a norm is equitable and verifiable before they adopt it. They want to make sure others cannot circumvent the system before they agree to limit their own capabilities.

4. Communication and Signaling

Norms provide a reference by which stakeholders can characterize proper and improper behavior, which are often subjective and require communication. International agreements, standards, and statements, elucidate opinions on a behavior, making clear what is threatening or destructive to various actors. Similarly, non-threatening activity can be perceived as threatening without proper communication. Russia and the United States might be conducting similar activities against the other that both perceive as aggressive and escalatory. One participant referenced Cosmos 2543, a Russian "nesting doll" satellite, which may have inspected a U.S. Government satellite. The speaker emphasized that if the United States clearly delineated what was proper and improper behavior, it could increase the social cost for Russia to engage in this kind of activity. The United States could work with Russia, or any other adversary, to agree on certain behaviors that are mutually seen as unacceptable.

Some participants highlighted that escalation is a key consideration and adversaries may conduct

OneWeb satellites unless the company could prove the satellites would not be used for military purposes.[5] Several attendees expressed concern over what might happen if commercial space companies continue to become intertwined with military activities, and whether having a military payload on a commercial satellite would put that satellite at risk during conflict. Panelists highlighted that space will be an extension of terrestrial conflicts and that the use of space intensifies the inclination to employ counter-space techniques. However, one speaker recommended that the United States and its allies need to consider establishing a norm to communicate when a satellite is a military asset and when it is a commercial asset.

6.   Norms during Conflict

Several participants noted that norms are often violated during conflict. A modern example is the use of chemical weapons in Syria, a violation of the Chemical Weapons Convention. The outrage prompted by a country violating a norm helps countries locate and refine the norm's boundaries and clarify improper behavior. One speaker commented that the Nuremburg Trials exemplify how norms can be enforced even when they are violated during conflict. The world was shocked by the Nazi's wartime behavior and used the trials to document violations and punish the perpetrators.

One panel discussed that some agreements may be violated without provoking a response as other actors may not be outraged or have a capability to respond. In 2015, the United States and China signed an agreement stating that neither government would conduct cyber espionage for a commercial advantage; however, this has not prevented the Chinese government from sponsoring such activities.[6] The violation of this agreement shows that public

aggressive operations to threaten other nations. One panelist suggested that norms may not prevent countries from threatening other nations, but they can create red lines that countries should not cross without risking escalation. Several participants used a fighter jet analogy in which a fighter approaches another state's asset without shooting at it. These behaviors demonstrate a capability that can be easily misunderstood, leading to unintended escalation. The participants recommended developing norms for this scenario, encouraging nations not to conduct activities that might be misinterpreted and lead to unnecessary escalation.

5.   Dual–Use Technologies

Communication is especially important for determining intent of space assets that may have both civil and military applications. In the Russia-Ukraine conflict there is increasing commercial space involvement. SpaceX is providing internet access to Ukrainian people and its military, through Starlink constellations. Russia refused to launch

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5   OneWeb Russia story reported here: https://spacenews.com/oneweb-leaves-baikonur-cosmodrome-after-roscosmos-ultimatum/

6   For more information, see: https://sgp.fas.org/crs/row/IN10376.pdf

statements are not always an indication of intent. China continues to gain a strategic advantage through cyber espionage and does not suffer a consequence that outweighs the risk of continuing these operations.

One participant discussed that actors will observe the norm when the cost of international reaction exceeds the benefit gained from the activity. The United States can impose social costs on the bad actor by calling out the improper behavior. For more serious aggressive activities, the United States can also deploy sanctions or provide capabilities to the victim, below the level of armed conflict. However, to impose a cost, norms should be interwoven with other pre-existing agreements, using similar terminology to strengthen the perceived legitimacy of the proposed norm.

C. Conclusion

The IDA forum on Norms of Behavior in Space is the second in a series of annual events hosted by IDA on space topics. Given the rise in space activities by a diverse set of actors, discussing norms, hearing perspectives about crafting norms, and studying norms was a valuable exercise, bringing the space community together. Norms can instill and encourage observable behavior that is acceptable and responsible. They can also serve as a more practical alternative to disarmament or arms control approaches. This approach can be expanded to develop future norms in space including rules around rendezvous and proximity operations, safety-related functions, critical infrastructure, safe zones, and right of way.

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