



“Perspectives on Sustainable Space Activities”

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Perspectives on Sustainable Space Activities

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I'd like to speak about our approaches to governance of space, and how we can develop governance models (whether hard treaty law, soft law, norms, or other modes of behavior) which are durable to changing geopolitical conditions and technological developments - neither of which we can predict. This presentation is aimed towards a reminder of how and why we establish norms.



Today, many people believe that a conflict in outer space is simply inevitable, and they are steadily preparing for this inevitability. Their pessimism, and their actions in preparation for conflict, in turn, drive observers, including other states, to arrive at a similar conclusion about the inevitability of conflict in outer space. This vicious cycle, where actors look to the postures and the actions of others preparing for conflict, only serves to reflexively increase the inevitability of conflict. In other words, believing that the worst will happen, and preparing for the worst, makes the worst more and more likely.



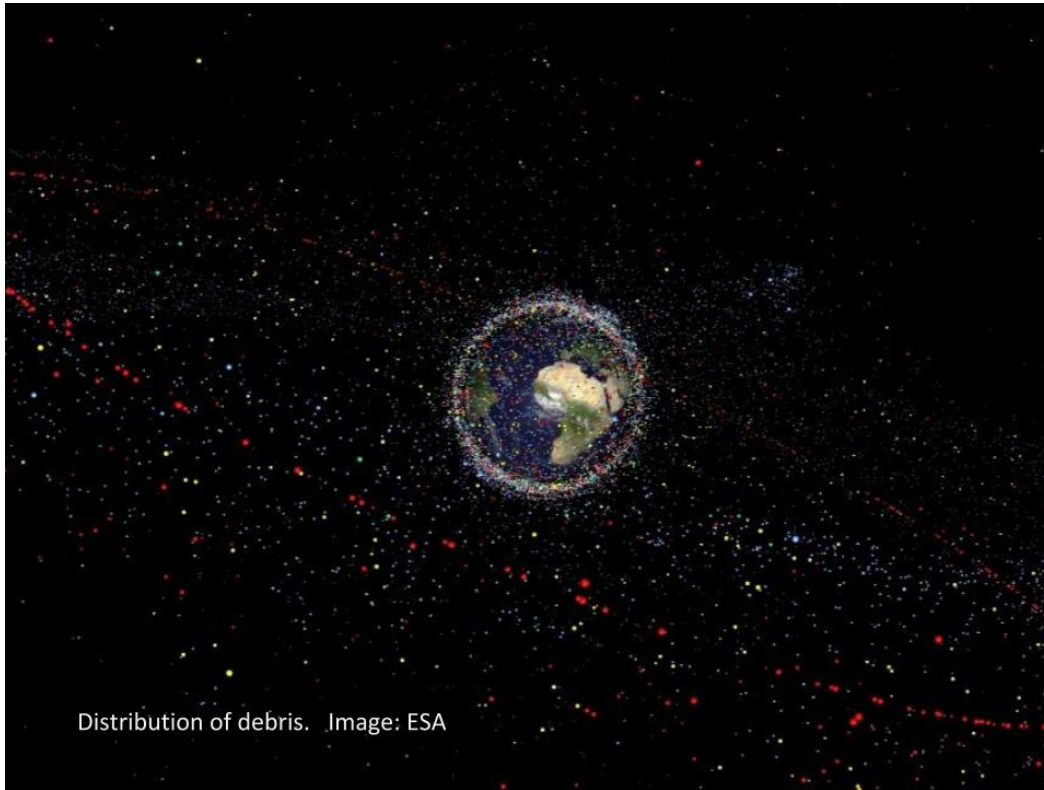
Is conflict in space truly inevitable?

What future can you envision happening in space?

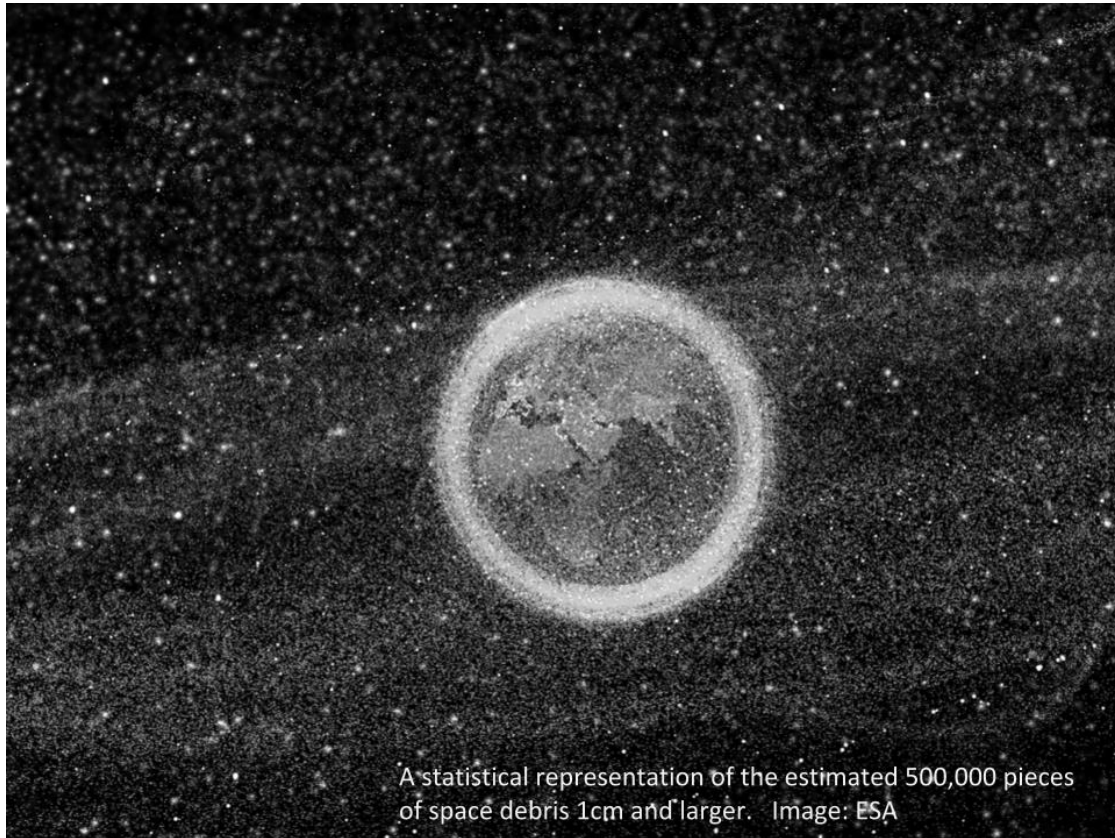
Does it involve conflict happening?

Does it involve a space debris problem so bad that entire orbits and activities are un-usable?

However, no rational actor truly wants or even prefers conflict to happen in outer space. If no one wants conflict, why must it be inevitable? Conflict in space is not inevitable. We have the power to prevent it. Rather than that future, a sustainable, and prosperous, and inspiring future is possible, and we can adopt that vision and work towards that.



There are certainly many reasons to be concerned about the continuing peaceful and sustainable uses of outer space. In critically useful orbits, space debris is a pressing concern, and a problem that will continue to worsen even if all new space launches cease completely. The creation of new space debris threatens the long-term sustainable uses of outer space. Likewise, without removing space debris, the existing population of space debris will prevent us from achieving the future we want.



Our collective long-term interest, therefore, is to address and solve the space debris problem, by removing existing debris, and by not creating more debris.

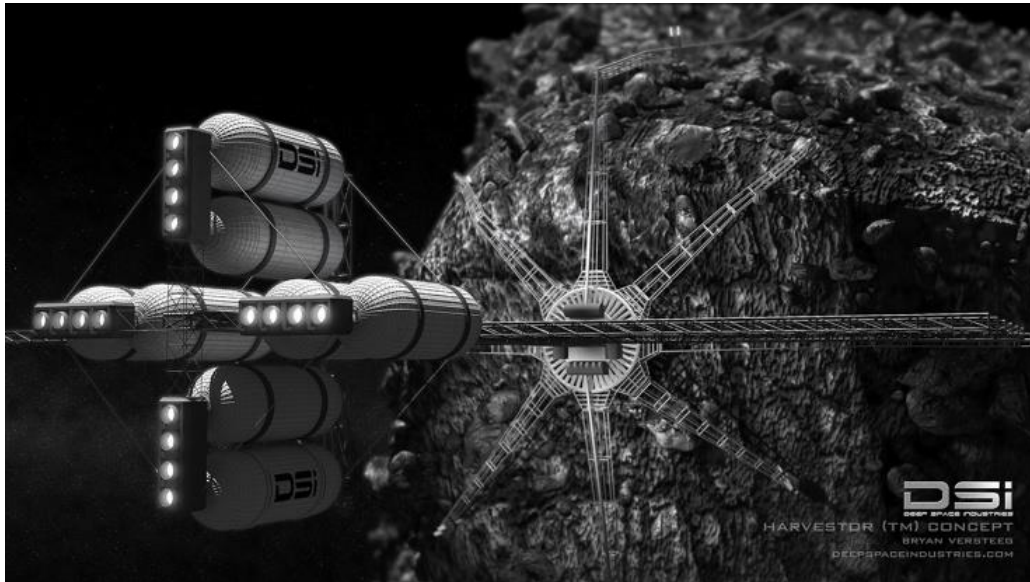
Space also contributes to sustainability here on Earth. However, remote-sensing, GNSS, and PNT applications for human and environmental security also face challenges—challenges that are largely political and administrative, rather than technical, include cost and licensing, technical capacity, data and access limitations, and donor skepticism. Again, it is in our collective long-term interest to continue, and even increase, the harnessing of space assets and technology for human and environmental security here on Earth.



As an engine of innovation, ready to take risks and push technologies forward, the private sector is an indispensable partner in the future of space activities. Ambitious and innovative business plans and emerging technologies include smaller and more advanced satellites, reusable rockets, space-planes for tourism and point-to-point travel, and on-orbit servicing of satellites.



Concerning these advanced operations in space, our collective long-term interest is to allow these technologies and applications to begin. To do so, we must face and address the security implications of these activities, including issues of space traffic management and space situational awareness. The question is - can we, as a international community, develop norms that prevent misapprehension and suspicion, and allow these cutting edge technologies and novel plans to develop?



Similar issues surround the use of celestial resources. Ambitions exist for harnessing the vast natural elements of the solar system, to build deep-space economic infrastructure such as depots with air and water and fuel, and for deep-space manufacturing and habitats.

As with any market, inequalities between actors exist, and some commentators have incautiously said that we are on the verge of a “gold rush” in space. The potential for competition, jealousy, suspicion, mistrust, and heightened tensions exists as we develop space resources. However, again, our collective, international, long-term interest is to allow innovation and technological advancement in space technologies. It is likewise in our collective long-term interest to allow private companies to take risks, to innovate, to profit, and build new industries and economies. Of course, always while under the watchful eye of their authorizing and responsible state.



Reflecting on long-term interests and values related to outer space will allow us to see what we have in common. The stakeholders include states, including their military and civilian arms, along with private industry, the scientific communities, and those on Earth using space assets in their infrastructure. We all value and will benefit from the long-term sustainability of space activities, and we must take these values into account in our approaches to space.

How do we help this possible future become the future that, indeed, happens? How do we prevent space from becoming a domain where conflict threatens our ambitious and inspiring future? Likewise, how do we prevent a undesirable future where collective problems like space debris interferes with and even prevents our access and use of space? The answer is by keeping the future we want, and the values and interests attached to them, ever present in our minds as we articulate our international and national plans, policies, and strategies.



Well-constructed and rational approaches to space will help states forgo short-term temptations for unilateral bad behavior, in favor of richer gains in the future in a system in which states comply with norms. States benefit from complying with norms in a world in which other states are complying as well.

In other words, you sometimes are annoyed by a red light in traffic, and you may want to temporarily disobey the rules you previously agreed to observe. But, you benefit from living in a system of rules. Your freedom and safety is increased because you know that a system of rules will allow you to predictably and safely operate and live. While your short-term, immediate freedom is sometimes restricted by an annoying and inconvenient red light, your overall and permanent freedom and safety is actually increased. Rationality requires that long-term interests are preserved by actions taken in the present. Therefore, you don't run the red light.



The traditional arms race scenario, sometimes called a “prisoner’s dilemma”, where suspicions provoke states to prepare for conflict, and bad outcomes are more likely, does not apply to space. This is because we all collectively share the space domain, we can observe other’s behavior, and must rely upon each other to preserve the domain we share. Likewise, we would all bear the burden of the repercussions of an unusable space environment. Additionally, when we keep space conflict-free and usable, we save money we would have spent on arms and security. When we keep space conflict-free, we increase our own security by reducing our exposure to risk and harm. And lastly, when space activities are done in a peaceful and sustainable fashion, we can then more easily promote scientific, technological, and economic activity and advancement.



Promoting Cooperative Solutions for Space Sustainability

Habits of coexistence,

- containing **values** and **long-term interests**, rationally arrived at, and
 - incorporated into plans, policies, and strategies, and
 - adhered to (despite temptations)

will prevent an unsustainable future in space, or conflict in space, and

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Rather than rivals heading towards predetermined and inevitable conflict, we need to develop habits of coexistence. Habits of coexistence, containing **values** and **long-term interests**, rationally arrived at with all stakeholders, and then incorporated into plans, policies, and strategies, and adhered to (despite temptations when they seem inconvenient) will prevent an undesirable future in space, or conflict in space, and allow us to realize the future we want.

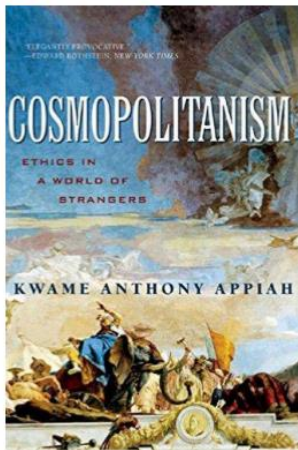


Our technological prowess has outpaced our ethical and moral sophistication, and our ability to easily incorporate everyone’s interests and coordinate our actions. In order to progress towards a sustainable global space community, we must always consider and reflect on the future that we want, and worry about the future we don’t want. As stated, we are concerned with remediating existing debris, preventing new debris, using space assets for human and environmental security, and allowing technology and private sector activities and capabilities to progress. Lastly, no one wants conflict in space. These are only some of the values we attach to space.

Habits of coexistence, including governance models and other plans, can balance long-term interests and short-term requirements. With these insights on long-term rationality of plans, and the necessity of adhering to them, the Secure World Foundation recommends that the international community continues and even increases its efforts towards effective governance models. As part of this High-Level Forum leading into UNISPACE+50, the fundamental exercise is contemplating desirable and undesirable futures in space, what activities we want to see happen, what outcomes we want to avoid, and what challenges we face.

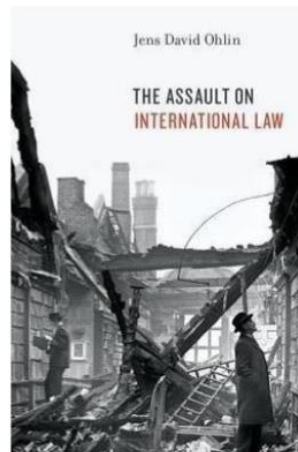


The governance models we then create should always be in conformity with these long-term interests and values. The work towards these models should always incorporate long-term perspectives. And because they do so, they will justify adherence to them, instead of short-term temptations to disobey or derogate from them. Again, you may not like stopping for red light, but knowing that you live in system where that's the rule, you know that stopping actually increases your overall safety, opportunities, and consequently, your freedom. Thank you.



Concepts from
Cosmopolitanism: Ethics in a World of Strangers
by Kwame Anthony Appiah

and
The Assault on International Law
by Jens David Ohlin



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