Counterpoint: The International Community Should Not Take Stronger Action to Prevent Space Pollution

Thesis

The challenges posed by space pollution can be addressed without strict international regulation and enforcement.

Talking Points

- Much of the debris in low Earth orbit deorbits and burns up in the atmosphere, reducing long-term accumulation risks.
- Stricter controls could burden private companies and delay scientific and commercial advancements in space exploration.
- Advancements in satellite shielding, debris tracking, and collision avoidance systems help mitigate risks.

Summary

Among those less concerned about space pollution, a key argument is that much of the debris in low Earth orbit will not remain in orbit long term but will instead deorbit and burn up in the atmosphere. To support that assertion, they point to data such as that presented by the United States' National Environmental Satellite, Data, and Information Service (NESDIS), which noted in a 2018 web post that when a "satellite begins to fall back toward Earth and loses altitude, the compression and friction in the dense region of the atmosphere closest to the Earth generates a lot of heat which breaks up and burns most of the satellite machinery." NESDIS further explained that in some instances, a satellite being decommissioned "has enough fuel" to be maneuvered deliberately toward Earth, and "it can fly back through the atmosphere and be crashed into the ocean." In both possibilities, the satellite would not remain in orbit and would thus not be at risk of colliding with another piece of debris. NESDIS also noted that a decommissioned satellite or other object was unlikely to harm people or property on Earth, as "any objects that do not burn up and disintegrate upon atmosphere re-entry are likely to fall into the ocean (which covers over 70% of the surface of the Earth) or a sparsely populated land area."

In addition to minimizing concerns about space pollution, some of those working in the space industry argue that stricter controls and regulations dealing with space debris could unnecessarily hinder the work of the private companies making strides in the field. Writing for *Aerospace Security* in 2022, Alyssa Goessler described the transition from space exploration that was the exclusive domain of governments to the commercial sector's involvement. Since the 1984 Commercial Space Launch Act, she characterized the ensuing decades as an ongoing "struggle to align a

legacy regulatory system with an increasingly diverse space environment," with conflicts that at times existed between goals of spacefaring countries' national security and those of commercial companies' innovation. Goessler went on to profile US-based space companies' preferences for incentives over regulations: "a space sustainability rating that will provide a new, innovative way of addressing the orbital challenge by encouraging responsible behavior in space."

For some critics of efforts to tackle space pollution through regulatory means, strict rules or guidelines are unnecessary due to technological advancements that help to mitigate the risks of space debris. Such advancements include technologies facilitating collision avoidance, which the European Space Agency (ESA) defined as maneuvers that should be "a regular part of flying missions in low-Earth orbit." Collision avoidance, the agency noted, could be improved further through the use of "automation, space traffic coordination, [and] new communication protocols." Those seeking to mitigate rather than regulate space debris likewise focus on tactics such as active debris removal, which the ESA has defined as "designing missions to remove larger pieces of space debris before they break up into clouds of dangerous debris and designing interfaces for satellites to make them easier to remove by such missions," among other strategies for debris mitigation.

Ponder This

- The author has presented the fundamental positions for this perspective in the debate. Outline the strengths and weaknesses of each perspective.
- If asked to begin forming an argument for this position, what sources would you need to build your case? What fundamental information do you need? What opinion leaders in this debate would you look to in solidifying your argument?
- What are the weakest aspects of the position outlined by the author? How might those weaker arguments help you prepare a counter argument?
- What additional Talking Points could you add to support this position?

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