



2021 SPACE TRAFFIC MANAGEMENT DIVERSE DOZEN

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There are a growing number of state actors and new satellites in space, as well as an accelerating drive for space commerce and exploration.

On a recent trip to Alaska, Moriba Jah, an astrodynamist and space environmentalist, experienced an inner shift in perspective on sustainability and recognized how the indigenous peoples of our world have important lessons and tenets to share that may serve as a basis for us to thrive in space, while doing so in a sustainable way. What seems to be missing from the space community writ large is an inclusive conversation about how best to go about doing these things as one humanity.

In an effort to address this, and coming from a space of honoring and respecting the relationships and relatedness among all things, as well as of acting with compassion, Moriba Jah has partnered with ASCEND to create a first-of-kind annual event that invokes **diverse and unique voices from humanity** to tell the world about salient issues in space safety, security, and sustainability.

The ASCEND Diverse Dozen represent a profile of human constituents with thoughts worth sharing!

www.ascend.events

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Recruiting Empathy: The Case for Storytelling in Sustainable Space

Satellites are an essential part of our everyday lives. The Global Positioning System (GPS), phones, internet, banking: our society depends upon objects in orbit. Satellites are also vital components of intelligence gathering and weather predictions--issues of key importance to militaries and governments. And yet, despite decades of forewarning about the impending catastrophe of excessive space debris, there is no effective international solution. There have been small steps taken here and there by disparate groups but these small steps, while forward progress, often are lacking in specifics and have limited feasibility.

To make the giant leaps needed to prevent orbital debris from contributing to a tragedy of the commons, we need to focus on recruiting empathy from all the stakeholders. There is already technology developed for on-orbit servicing, life extension, and clean-up and there are detailed national and international policy solutions. What's missing is empathy recruitment to explain to the public and to policy makers why on earth they should care enough about tiny pieces of metal floating around above the earth to devote time and money to the problem.

There has been Nobel prize winning work showing that instead of making decisions based on rationality, humans are most sensitive to the framing of issues. For example, the framing of climate change as a scientifically contentious issue has resulted in decades of debate with limited action---a clear example of the power of a compelling story to affect the actions of decision makers and public opinion and effectively alter the future of the planet. The same phenomenon has played out with the COVID-19 vaccines—framing of the issue as political and not scientifically settled has divided policymakers and prolonged the pandemic.

Storytelling is powerful because it appeals to the limbic brain, the first part to form over the course of human evolution. It calls to our gut and feelings of trust and loyalty as opposed to relying on the neocortex, the rational part of the brain, to make decisions. We know that telling convincing stories is effective at producing change. For example, a pioneering project in Tennessee took on the massive task of reframing how residents thought about the effects in adulthood from adverse childhood experiences--a nebulous topic that has concrete impacts on society. They tested different messaging strategies, developed carefully chosen metaphors, and focused on feasibility instead of innovation. As a result, the culture around early childhood experiences in Tennessee has shifted as measured by the kinds of investments happening throughout the state.

Finding a solution to space traffic management requires collaboration of industry, academia, and essentially every country's government. To bring all those groups to the table to negotiate, let alone to settle on a solution, requires everyone to understand the importance of sustainability in space and be committed to achieving that goal. To do that, we need a compelling story.

Companies like SpaceX and One Web who are launching mega-constellations have different priorities than emerging space-faring nations. Politicians are beholden to their constituents who are, quite reasonably, more likely to be concerned with issues of healthcare, jobs, and education, than with developing practical, transparent, evidence-based strategies and methods for space traffic management. That's why the solution is a story, a framing, that shows why everyone should care about the spider web of satellites soaring around our planet.

To be clear, I am not arguing for a return to the Apollo myth of space as inspiration for greatness as the framing with which to engage decision makers; we need a new story to reflect the new world we live in. In the past seventy years, space exploration has shifted from something we do for political reasons, to something we do for scientific reasons. And now, we are entering a third phase of space exploration, one that combines the awe-inducing power of the Apollo phase and the technical expertise of the second phase. In this new phase, we must explore for the sake of urgency and empathy. It is no longer exploration because we can; it is exploration because we must.

The "why space?" story we tell must change as we enter this new era. It must reflect the priorities of the new generations who are living under the worst ever levels of income equality, facing climate-change induced disasters, and battling a global pandemic. It cannot be a story of white men climbing into capsules and shooting into space under the stars and stripes. It needs to be a story that represents the new era. As the next space generation, we have the deep privilege of authoring the next chapter of space exploration. May we honor that privilege by writing a story grounded in intersectionality, diversity, and sustainability.

The 2021 cohort of the Space Traffic Management Diverse Dozen are influential thinkers and emerging leaders from around the globe. Led by Moriba Jah from the University of Texas at Austin, these authors are also the featured speakers in a series of rapid-fire lightning talks that highlight the most important issues surrounding safety, security, and sustainability in the context of space traffic. What needs to happen in order for space to be more transparent, more predictable, and to have a globally accessible pool of evidence to help people make decisions and hold them accountable for their behaviors in this shared domain?

Find out by watching their ASCEND session at www.ascend.events



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