SPACE SECURITY AND GENDER: INCORPORATING THE GENDER PERSPECTIVE INTO DECISION-MAKING PROCESSES

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Introduction

Incorporating gender perspectives and experiences is necessary to discussing the social impacts of space as well as global security and prosperity. This is highlighted by recent data on gender parity across health, education, politics and workforce, revealing some astounding disconnects in communication and social understanding. The World Economic Forum reports that at our current rate it will take 217 years for the Global Gender Gap to be closed; these facts can feel isolating and demoralizing. Gender perspectives and women are not just data points, we need to do more to recognize and appreciate women acting and leading in aerospace and society.

Given the limitations of this presentation, the images I collected are far from a complete picture of women's interests and experiences globally. These are just a few snapshots into understanding the value and volume of women's interests and experiences, contributions and vulnerabilities.

UNW/ UNOOSA Space for Women Initiative

Last October I had the privilege of participating in the UN Space for Women Expert Meeting, where over fifty women and men gathered from around the world to talk about women and space, and the challenges and programs that they are engaged in with their organizations and communities to bring greater awareness of gender equality to space and STEM. These discussions centered around organizational mandates of empowering women, fostering financial stability, and building peace and security, combined with the Sustainable Development Goal #5 on Gender Equality and Accountability.

Space for Women, a joint initiative of UN Women and Office of Outer Space Affairs, presents a unique platform for engaging in meaningful conversations about gender equality. The concept of Outer Space is also significant as it speaks to human inspiration, imagination and discovery. Joseph Campbell spoke of our perception of outer space as a reflection of our inner space, our beliefs, psychology, and archetypal myths—essentially space provides a reflection for our humanity on Earth.

Here we have an opportunity to observe the status of gender inclusion in the wider context, and how space directly and indirectly contributes to the betterment of life on this planet. After all, the cultural ecosystems that we develop and foster on Earth will inevitably be carried by humans as we explore and expand into space.

At the expert meeting, Simonetta Di Pippo, Director UNOOSA, and Scott Kelly, astronaut and UN Champion for Space, shared stories of female role models and mentors that inspired them to reach further in their careers and ambitions. They were not alone. Many participants raised the need for more visible stories, more role models, more mentors to inspire future generations in space, science and technology— and importantly, relatable mentors, not merely heroic icons from distant lands and (perceived) privileged backgrounds. Younger people need stories of confident women, smart women, and yet ordinary women

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who dare to dream, take action and achieve great things. This really isn't any different from the boys; the boys just have more stories already.

The narrative is just as important as the narrator, if we are to normalize gender parity in society and space

UN Women's Economic Empowerment platform is driven by technology, economy and foresight. It has been explicitly acknowledged that gender inclusion in space requires forward-thinking perspectives in all aspects of economy, recruitment in education and industry, management and leadership.

Previous UNIDIR meetings have also acknowledged that listening to gender perspectives unveils the diversity of gender *needs*, *interests*, *priorities*, *cultural values*, and *vulnerabilities*. While some of the factors impacting women are technological, others remain culturally relevant. These are multi-faceted and multi-dimensional factors that must be taken into account for effective decision-making and cannot be concluded from traditional linear thinking.

1. Technology empowers women

Lessons can be drawn from humanitarian and analogous sectors. Where women disproportionately suffer poverty and hardship in conflict zones and natural disasters, technology can empower them. Two thirds of aid mission budgets are often spent on logistics alone, consequently solutions on the ground require ingenuity, adaptability and flexibility.

➢ Ex. Following the earthquake in Nepal, neonatal care was at risk due to old and damaged facilities and equipment, with 2 week lags for importing supplies. They ended up having to 3D print medical tools. In 30 mins, they had umbilical clamps, otoscopes, fetoscopes, tweezers and wrist braces. *This is empowering women in their environment.*

2. Information and communication are human needs and rights

If you can reach one woman, you reach a community.

➢ Ex. In India, cell phones are used to communicate but not necessarily in the traditional way. With so many rural and remote communities speaking various dialects, relief organizations had to develop a system whereby the number of cell phone rings or missed calls indicate when food and clothing is being distributed and where.

➢ Ex. Video Volunteers, a woman-led social organization, teaches young people in India how to film their neighborhoods/communities, and partners with broadcasting networks to share the videos, to create accountability and trigger change from policymakers and local authorities.

3. Diversity and gender perspectives are assets

Great minds think alike, and also unalike!

Particularly in the technological and digital world we need to actively engage the entire population to identify the sources of disconnect and find applicable solutions. For instance, Wikipedia is 95% written by men. What does that indicate for the recognition of gender perspectives in information and data access?

The minority representation of women in management and decision-making positions as well as education and recruitment in STEM fields is concerning. Many of these hurdles come from thought patterns ingrained in cultural stereotypes which must be overcome.

Thought experiment

In a future workforce where robots can replace humans, with the work requirements: (1) cognitive ability (creativity, skills) (2) social skills (emotional sensitivity) and (3) contribution to societal challenges.

Will it be easier for a robot to replace men's skills or women's?

Perceived *fairness* is a fundamental underlying aspect of gender equality and ethics. The Capuchin monkey fairness experiment demonstrates how experiencing exclusion creates a sense of inherent unfairness.

Facts: What do they tell us about current gender fairness?
- Women represent 11% of the 536 humans to have gone to space.
- Only 17 women have been awarded a Nobel prize in the 3 science categories (since it began in 1901) compared to 572 men.
- Out of the 206 physics laureates recognized, only 2 are women.
- Currently a mere 29% of the world's researchers are female.
- Women represent 23.4% of political leaders, globally.
- Women hold less than one third of senior and middle-management positions.

4. <u>Gender perspectives are fundamentally about people and evolving inter-gender cultural experiences.</u>

Gender isn't just about data points, it's about people and values

Space is a tool – a multi-dimensional tool – presenting an opportunity for positive social impact. As a social tool, space can leverage change at societal and cultural levels, as gender perspectives are often tied to community culture.
- ➢ Ex. In Nigeria, space science and technology serves as a tool for confidence building and minimizing gender inequality. Since two of Nigeria's four satellite launches involved two female engineers, women were shown to not only have the capacity to obtain expertise equal to that of men, but also these women's voices were granted significance in a culture where women are often relegated to being seen and not heard, or having to wait to be invited to engage in an exchange of expertise and opinion.

- ➢ Ex. A social entrepreneur in Kenya initiated the Travelling Telescopes. Focusing on science education and astro-tourism, she partners with international organizations and transports telescopes to rural areas using curiosity as a driver for education. They acknowledge that while their focus is on educating children, culturally they must engage everyone and garner community support.

Inclusive decision-making means activating cultural sensitivities to community realities

Where decision-makers fail to take the culture, community and gender perspectives into account, good intentions can actually be counterproductive. Military forces in conflict zones now recognize the need for female engagement teams to build trust and communication with women in local communities, if they are to succeed. After all women are inherently invested in the peace and security of their communities.

➢ Ex. In Afghanistan, women destroyed a local water well provided by the military, because their daily walk to the old well served a culturally significant purpose (getting them out of the house and together). Similar experiences of rural women destroying technologies aimed at helping them have been shared in other countries for similar reasons.

5. <u>Indirect impacts of space on gender</u>

We need to widen the scope of how we view impacts of space on gender

➢ Ex. Erin Thompson, NY-based archeology professor and lawyer, uses satellite images to monitor and combat art crime from cultural heritage sites in the Middle East. She also instructs military officers in what to do when they encounter these sites and artifacts during deployment.

➢ Ex. Iranian artist and activist, Morehshin Allahyari, uses cyber-archeology data, 3D modeling and printing in her artworks, which are based on antiquities destroyed by ISIS. She saves the information to digital files, which can be updated, and embeds it into her resin sculptures.

These activities are significant to human history, history of women and today's society, and speaks to the range and diversity of gender perspectives.

<u>Conclusion</u>

Across the spectrum, gender experiences and narratives are directly and indirectly contributing and always informing valuable perspectives for consideration and inclusion

<u>4 Key takeaways on incorporating gender perspectives:</u>

➢ Stop presuming, and start listening—taking all voices seriously.
➢ Meet people where they are at; and actively cooperate in communicating.
➢ Think creatively in problem-solving. Think outside the box: what can space and related technologies do for women? AND what can women do for Space? This requires cooperation and collaboration.
➢ There is no linear formula. This is a multi-disciplinary, multi-dimensional and multi-cultural conversation, with broad implications, requiring us to connect the dots between people, needs and actions.