26 – Psychology

SUMMARY

Most space advocates err because they talk as though all astronauts will have to bear with very confined spaces basically driving them crazy. Starships and very large habitats will prevent that issue from being a problem. Rather the psychological issues of concern will be crew cohesion related to personality conflicts within the teams, marital issues, and private individuals bringing their pathologies with them. Ways of preventing these problems from arising are discussed.

CHALLENGES MITIVATED BY LARGE VOLUMES

Many psychology studies have been done in analog settings. A lot of these have to do with how the crew perform and get along when essentially locked up in a small volume with a handful of other crews for an extended period.

Confinement

In this book, evidence has been presented that it is likely that, by 2030, there will be a growing fleet of heavy lift vehicles with the full payload capacity able to be sent to the Moon or Mars thanks to full refilling at a LEO depot.

This large capacity will have a significant effect on the psychology of the situation and will be unlike the cramped quarters typically envisioned for small, government crew going to Mars for a scientific expedition. On the Moon, the round-trip time will be as little as two weeks. For Mars, early on, SpaceX is planning on launching dozens of Starships in each window. As the SpaceX fleet grows during the 2030s, fleets going to Mars will reach into the hundreds. Crew and cargo can be mixed so that one doesn't have to pack all passengers in just a few ships. With alternating sleep and sedentary schedules, not all passengers need to be bumping into each other at the same time.

Very Large Inflatable Habitats

Specialty habs consisting of a 100-tonne payload with 6 kilograms per square meter and 10 meters tall (three floors) would have a footprint of 12,241 square meters or 3.0 acres. In other words, early inflatable habitats could be extremely roomy and eliminate problems of confinement from the beginning.

Social Isolation

Analog missions also typically assume that the crew would be isolated from loved ones back on Earth due to time delays in communicating at Mars' distances. Well, that's more of a problem with Mars but not the Moon as the speed of light at lunar distances is only 2.6 seconds round trip.

But, with a fleet of Starships and the rapid growth of the base / settlement on the Moon, the social life will not be spending six months with the same six astronauts. Rather, there will be a community of people from a wide variety of backgrounds. Further, since the lunar base / settlement would be a permanent facility, couples could go or couples could even form within the base. So, the social situation could be a whole lot different than an Apollo 2.0 scenario.

TELEPRESENCE ON EARTH

Because of the Moon's proximity to Earth, one does not have to disconnect entirely from friends and family. One could even be telepresent at family gatherings using Segway-like devices that have screens showing the person on the Moon. So, one could literally be on the Moon yet attend the wedding of one's grandchildren. One could be present at the family Thanksgiving table and carry on a half-way decent conversation across the table. Of course, you can't eat their turkey but...

Keeping in touch with family.

NATURE DEFICIENCY

Some say that you would have to give up the outdoors if you were to move beyond Earth. Technically, this is correct until full terraforming has been accomplished. Yet, from early on, acres-large inflatable habitats could be designed to create natural, outdoor-like environments. We will want to have GreenHabs as part of the base. Couldn't they be designed with walkways, nature sounds, and even the occasional water feature? Greenery can be designed into the base if one so chooses.

GROUP PSYCHOLOGY

For the Initial Permanent Crew of eight, it will be vital for this historically important group of people to get along with each other without significant conflict. Screening, observations, and challenges can help identify which of the competing teams have issues. If during training and simulations some teams seem to get along fairly well then this is a good sign that they will probably also do well on the Moon for the six to twelve months that the world is watching them. And, if they know that the time is limited before the international astronauts start arriving and then the Initial Crew disperses within the larger base, then they will probably be able to bear with irritations since they would know that it was a temporary situation.

MARITAL CHALLENGES

Managing relations.

Six to 12 months for the Initial Permanent Crew is probably not enough time for marital problems to become serious. However, some planning might be advisable to ensure that neither affairs nor divorces occur. That would be quite the dark spot on the story of humanity's first permanent steps beyond Earth. So for example, the team could commit to behaving themselves and nipping any inappropriate attention in the bud. Men could generally work with men and women with women as a partial solution to preventing affairs. Husbands and wives could spend much of their workday separately so that they wouldn't always be "in each other's hair". Etc.

MENTAL CONDITIONS

However, people will bring themselves with them and hence bring some of their mental baggage too. We would like to think that, with proper screening and selection, that, during the ILB phase, international astronauts will be selected to be supremely psychologically healthy.

Yet, from previous experiences in LEO stations and one fairly famous incident of a love triangle gone bad involving an ISS astronaut, screening for psychotically health is not always an exact science. Further, as wealthy, private individuals start paying their way into the base/settlement, they will bring with them their health problems including mental health challenges. Space psychologists will be busy preparing the eventuality and providing needed services to the residents. But just the self-selection of wealthy people will probably create a population of better mental health than the general population on Earth.

By the mid-2030s there will probably be pretty good AI counseling services that will be able to help people process their own issues. And, for the personal touch, psychologists and psychiatrists will be able to serve their fellow residents as their contribution to the base's community.