

How To Survive in Space

Category: Holidays, Shavuot

When NASA was thinking of long-term space travel, there was only one group of people who seemed to hold the necessary secrets: the People of Israel.

The Real Challenge of Space Travel

Professor Velvl Greene from Minnesota was a renowned scientist. In the 1960s, he was part of a NASA research team that studied the potential effects of space travel on humans. During those years, NASA was preparing for the Viking program, which involved sending two unmanned spacecraft to Mars.

Ultimately, the spacecraft was launched in 1975, but the research Professor Greene was involved in had to be ready six years prior to the launch. As a result, the research team, including Greene, found themselves with little to do while still receiving NASA salaries.

As Professor Greene recounts, (chabad.org/3170867) one of the program directors called a meeting with the group of about thirty members and proposed that they start addressing the real challenge of space travel. He talked about the eventual goal of traveling to the stars, specifically Alpha Centauri, the closest star system to Earth, which is over four light-years away.

Given the spacecraft technology of the 1970s, it was estimated that it would take at least 830 years to reach that star. (Some argue that with a nuclear engine, it could be done in less than a hundred years, but the Nuclear Test Ban Treaty of 1968 makes that irrelevant today.)

The problem is that humans don't live that long. Therefore, the only way to reach Alpha Centauri would be to create a spaceship where at least two pairs of people could live, have children, and raise them aboard, with each generation continuing the mission. Greene's team was tasked with figuring out how humans could survive such a long journey.

Generational Survival

The first crucial issue they discussed was food. To survive, people need to eat, so they would have to bring everything from Earth. The team put a lot of thought into how to maintain a growing community in a place with no resources.

The next challenge they addressed was waste management. The problem is that if you throw something out of a spacecraft traveling at such high speeds, you can't get rid of it; it would just follow you outside.

Additionally, there are social issues to consider. Human history shows that there has never been a 40-year period without one group of people trying to eliminate another. How do we plan to address this problem? Another issue is what these people will do in their spare time. Running the spaceship will require only a few minutes of work each day, so how will the crew occupy their free time? If we don't find ways to keep them busy, it could lead to serious trouble.

Then, a question arose which fascinated him: how should the first generation teach their children about their mission? They will be traveling through space with only a manual given to them before launch. We all know how we feel about old manuals. If an appliance guide becomes outdated, we ignore it. So, what will happen with the second or third generation of travelers? They might discard the manual and start navigating the spaceship based on their own understanding, which will undoubtedly lead to getting lost.

At this point, the professor leading the discussion said, "There are very few precedents for a situation like this. I think we should learn from the Jewish method. As far as I know, they are the only group of people who have successfully passed down their tradition for thousands of years. We need to understand how they did it." This idea excited Professor Greene, and long after the discussion, he pondered the secret behind the Jewish people's success.

It is true, he concedes, that Jews everywhere still debate and discuss what exactly was given to Moses at Sinai and what has developed over the generations. However, when studying the Talmud, one cannot help but feel a sense of continuity. The message received at Sinai has not weakened; it is as clear and precise today as it was when the Torah was given. The Jews who pass on their traditions to their children know exactly what they are doing, and they

successfully pass this knowledge on to their children.

But there was an even greater problem. Those born on the spaceship would come into a world without gravity. The very memory of gravity would become a legend, something that existed in the past, like us hearing about angels.

In a weightless environment where there is no up or down, no directions, how are they supposed to know how to land the spaceship when the time comes?

To solve this problem, Professor Greene concluded that he would choose a trustworthy person, perhaps a bit naive but reliable.

He would tell him: “Abe, listen, besides all the other concerns like finding food and preventing conflicts, you must consider something else. You need to learn which way is up and which way is down, and you must teach this to your children, who will teach it to their children.

“Warn them that if even one generation loses this knowledge, everyone will be lost. People won’t like your message; they will laugh at you and possibly harm you, but you must persist. Otherwise, the entire mission will be in vain...”
(chabad.org/3170867)

The Secret

What is the true secret of the Jewish people’s success? For us, it’s not much of a secret; it’s quite clear. The Midrash tells us that before giving the Torah, G-d asked Moses for guarantors to ensure that the Torah would be transmitted from generation to generation. G-d wanted to know how the tradition would be preserved. The Jews first offered the prophets and the rabbis as guarantors, but G-d was not satisfied with this suggestion. Next, they proposed the elders, the retirees who returned to the synagogue, but this idea was also rejected. Finally, the Jews declared, “Our children will be our guarantors.” It was thanks to this that G-d gave the Torah to the Jewish people.

The Rebbe explains that this Midrash reflects a verse in Deuteronomy, in Va’etchanan, where G-d describes the giving of the Torah starting with the words: “take heed... lest you forget the things which your eyes have seen... and make them known to your children and your children’s children—the day you stood

before the L-rd your G-d at Horeb” (Deuteronomy 4:9-10). The memory of the giving of the Torah is immediately tied to the responsibility of teaching it to our children.

Furthermore: the first portion of the Shema includes important general commandments like tefillin (“You shall bind them as a sign on your hand, and they shall be as frontlets between your eyes”) and mezuzah (“Write them on the doorposts of your house and on your gates”). But before those, right after the commandment to “love the L-rd your G-d,” it commands us to teach Torah to our children: “And you shall teach them diligently to your children” (Deuteronomy 6:7). Notice that it does not say explicitly that a person should learn Torah themselves—but rather to teach it to the children. (Toras Menachem vol. 72 pg. 275).

It’s also noteworthy that it doesn’t say that we should “teach”; the word the Torah uses here, “v’shinantam” (you shall teach them diligently), implies *repeated* teaching, like someone who wants to memorize something by repeating it over and over again. In other words, we need to—not only teach—but also ingrain the teachings deeply within the next generation.

Ladies and gentlemen, the fact that we are celebrating the giving of the Torah 3336 years after it was given at Sinai is the best proof that the endeavor succeeded. The Jewish people have managed to pass down the message for over a hundred generations, from father to son, mother to daughter, and teacher to student. The method works! And with this same method, we will continue to pass it on to the next generation. We have proven ourselves worthy of the choice G-d made in us. Despite all the hardships and against all odds, we stand here today and once again declare, “We will do and we will listen.”

Good Yom Tov!