

Draft

“A Box with a Roof and a Door on the Moon”

David Goldsmith



For as long as anyone can remember, humans have had a natural inclination to explore foreign and faraway lands. By land, sea, and air, we’ve stretched our reach to distant places, sometimes to conquer and most nearly always to understand all that is new and unknown. Certainly the most notable trek beyond our physical and mental horizon was realized with Armstrong’s first step onto the moon, but as awesome as that feat was, we still want more. And more is what the collective human race is determined to experience. The questions are, who will make the next momentous leap, and how and when will they make it?

Have we gotten dumber?

From the outside it may even appear that humans have gotten dumber and not smarter. We were able to visit the moon in 1969, but in the 45 years since, humans have only been in low orbit around the planet. Some may argue that part of the blame may fall on the individuals who sold the American people and the government on the Space Shuttle program, which was promoted as an inexpensive means by which man could continuously travel into space not unlike intercontinental airplane travel. What happened was nothing short of the formation of a financial “black hole” within the space program where funding poured into the program often at the expense of other programs. But of course, we did *not* get dumber.

The reality is that over these past 45 years, we have made huge advancements, especially in terms of how computer power has been used; the computer power used to manage the entire first trip into space may now rest within the palm of our hands! And as far as whom our players are, consider how

we've seen private citizens and entities participating in space travels at a fraction of the cost of government programs. Think Space Exploration Technologies and Virgin Galactic. Around the world, tens of thousands of people still pursue this dream as individuals and collectively within organizations such as the National Space Society, also.

A sustainable settlement on the moon

I was recently speaking to a senior insider who works side by side with the people who could very well make possible the ventures of our next band of space explorers and another group...space settlers. In a fascinating conversation, he shared with me some of the thinking behind the push to occupy prime real estate on the moon's surface as a way of exploring universal frontiers. Their take: how can they put a sustainable settlement of 100 people on the moon? I enjoyed hearing about what great minds were thinking, and as much as I respected the scientific and innovative aspects of their vision, something in their overall premise seemed a bit off target.

In their zest to make significant progress in space travel and to rekindle the human extraterrestrial spirit, the thinkers take is to seek ways to establish a permanent living community—let's use "settlement" versus "colonization" to avoid any negative political undertones— for 100 people. The number 100 is important, signifying the intent to create a self-sustainable living condition, addressing items such as minimizing the effects of weightlessness and radiation on the human body, erecting chambers for growing plants- for food, and putting in place all the structural institutions like education, health, energy, business, and government. What an amazing big endeavor, right? Just try to wrap your mind around the massive entirety of all these moving parts! It can be mind boggling, for sure. And perhaps that's where this whole undertaking seems "off" to me. What if this big endeavor is nothing more than a big question...but not the right question?

Maybe the big right challenge is different

If, the strategy to put settlers on the moon initially seems to be the right challenge, I'm going to ask you to bear with me, dare to seek a new perspective, and accompany me on a cognitive journey through a few mental leaps.

What if we were to put aside for the moment this idea that we need to settle 100 people? And what if we were to take a figurative "page" out of historical settlers' "books" as we approach future space exploration? Throughout the course of history, the traditional settlement scenario typically began with a small group of individuals venturing into new lands with a bare-bones approach to settlement and survival. Perhaps a ship would drop off a few people, return to the mother land, restock with supplies and maybe gather up a few more people for a subsequent return trip (...hopefully return, although that wasn't always the case). Little by little, they developed the space and brought more people into it.

I realize that we need different mechanisms and apparatuses to ensure survival on the moon, but in essence, the foundational concept of providing what's needed to survive is still similar. So whether you're talking Europeans setting sail for the Americas or earthlings rocketing to the moon, we're still talking about transporting and supporting new explorers so that they have a successful venture. Now

consider revising the number of settlers needed to be on the moon, paring the number from 100 to say 1, 2, 3 or 4, thus slightly changing course of your thinking.

Rather than pondering the walloping endeavor of creating a settlement of 100 people, we decide:

We need to put a box with a roof and a door on the moon.

This simple change in your mental direction changes the entire approach to meeting the desired outcomes of expanding space flight and exploration. Once the first settlers set up a home with the expectation of living on the moon for a month or half a year—versus a permanent condition where you have to consider what happens if someone is born on the moon—our minds and exploratory desires can expand. Now you are drawing people into this venture in a different way.

For example, everyone living on earth will want to see pictures and videos, feeding their curiosities about what the experience may be like for them. You would have engineers going to bed dreaming about how they can now participate by building something for the moon that expands our ability to explore, understand, and perhaps live.



When you consider this change within the context of what happened when Roger Bannister became the first man to break the 4-minute mile barrier in 1954, which was that runners thereafter broke through this previously insurmountable feat quite regularly, you can only imagine the fast and furious flood of potential qualified contributors who will be knocking at your door to offer their solutions, creating a synergistic progression.

When your numbers can build, from 4 to 8 and then 12, 21, 40, 70 and finally 100 settlers and these individuals are allowed to come and go in short spurts or remain for longer periods of time, experts studying the effects of the moon's conditions on the human body are afforded the opportunity to conduct better studies. And as far as the other shakers who can make this a reality, people from government, industry, and science, they, too, are better positioned to make their best decisions and contributions in the long run.

Rekindling the dream of space exploration on earth

Like any project, you need people to buy in and the shift in thinking would do this: You would attract the best and brightest and to make the most of their talents and insights because you have now made this an endeavor about everyone's dream, so everyone can participate.

It's not common knowledge, and yet I was fascinated to learn that there currently exists a Kevlar-based structure that can be collapsed and transported by rocket, then easily unfolded and erected with solar panels, water and sewage systems, and air control components already in place, making the unit ready to be deployed to service countries that don't own space stations. The company that manufactures this item plans on marketing it as an "International Space Station" in a box to countries that may not have the funds to otherwise have such a set up or to organizations that are not experts in space travel as a means of creating research facilities in space. The Kevlar product acts as a great light shield that protects users and equipment from space debris. (Space experts will tell you we already have off the shelves items like this and almost everything we need to step forward onto this next frontier.)

Can you picture it now? A spacecraft takes off with the necessary supplies with a reusable rocket to return to earth. The building is opened and placed on the moon. The team hooks up all the functions and then the rocket leaves for earth. The team starts to live as we'd expect. Looking for opportunities, just like early earthly settlers have done, they tour and probe the land, looking from atop of mountains and around craters. Back on earth, the rest of us watch video streams of the settlers going about their daily tasks, we learn from their blogs and read their tweets, and we eagerly await updates to their Facebook pages or catch their Foursquare entries and try to imagine ourselves in their moon boots.



Truth be told, many of us would envy those who became the first to experience life on the moon. (I know I'd go in a second if the opportunity presented itself!) Call it ego, pride, thirst for adventure, or simply a basic human curiosity.

And those previously-mentioned prospective contributors—the people in science, government, industry, etc.—among them are those who want to be “firsts” to put their names in the history books: the first air conditioning unit, the first wine or beer, the official power tool of the moon, the first two to walk hand in hand, and so on.

By asking one best question, we focus innovative thinkers on the end outcome, attract the highest expertise, allow the ablest to contribute, and otherwise gather and utilize the necessary resources to convert the dream of furthering space travel and exploration into a reality. It's not a stretch to see that a major reason why someone, a group or an organization, would like to fund this project is for the purpose of being able to put their own name down as the funding source of the first space settlement. That's huge.

All the other challenges become solvable

Furthermore, this approach helps to manage costs better, as private investors won't spend billions, they'll spend a fraction of the costs. Imagine there being a schedule of repeated shuttle flights between the earth and the moon (and eventually from the moon to Mars and other destinations). The simple shift will create oceans of new ideas and methodologies to make the dream a reality.

Another plus that comes from focusing on this *box with a roof and door on the moon* as a private initiative is that land rights can then be pushed off the table before the expedition even bleeds into the political arena. We get a few people to live on the moon and let the politicians argue about the implications after the fact.

With this one broad challenge—put a box with a roof and a door on the moon—we move within closer range of hitting the target. We move from solving a thousand Rubik's Cubes at once to addressing a more manageable objective, where everyone can more easily wrap their minds around achieving the desired outcomes.

When John F Kennedy said, "I believe that this nation should commit itself to achieving the goal, before this decade is out, of landing a man on the Moon and returning him safely to the Earth," he ignited the simmering curiosities and hopes within all of us. I'm no JFK, but I do believe that if we focus on putting a box with a roof and a door on the moon, we'd not only achieve the desired outcome of continual space flight and exploration, we'd achieve it tomorrow.

Try sleeping tonight with this little slogan rattling around in your head.

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