

Why do we have a space program anyway?

Many people in the past have asked this very same question. They usually continue on, "We should spend the money fixing our problems here on Earth first."

This is a good question and a reasonable assertion regarding where we spend our science dollars. Some of the old answers such as "Because exploring is in our souls," or "Because it is our destiny", seem a little trite to the concerned taxpayer. So why *do* we go?

Exploring, in the past, has almost always delivered much more in economic or scientific benefits than the original explorers could ever have imagined. Think of Lewis or Clark standing in downtown Portland Oregon today, or even better, Christopher Columbus standing in Times Square. It would be beyond their imaginations. There would be the same feeling of amazement if Neil Armstrong could look up at the enormous pressurized structures that will probably exist on the moon in a hundred years time. Exploring really IS what we do. If we hadn't pushed out from the plains of Africa those thousands of years ago, we probably wouldn't have survived until now and we certainly wouldn't have been as widespread and successful a species as we now are. Space is just the next big step that we have to take if we are to survive and develop as a species. To do otherwise will result in stagnation and our eventual demise.

The next question a skeptic might ask is "Why don't we just spend the money on specific scientific needs like curing AIDS or Cancer?" The answer is that we do already spend huge amounts on problems like those. The difference with space exploration is dissimilar to specific issues like the above; it requires work in so many different and seemingly unrelated fields. Space exploration requires research in materials science, medicine and human biology, electronics, computers, propulsion systems, energy production, nanotechnology, communications, weather forecasting, waste-recycling systems, geology...the list is almost endless. It involves almost everything that we as humans do. Therefore we can expect breakthrough technologies in all of these fields, some completely unexpected. The impact on our overall economy is almost immeasurable in terms of new products and services being created from us trying to make spaceflight possible. No other field of scientific endeavour delivers as much.

The Earth is such a small part of the universe, almost infinitesimally small compared to what else is out there. Is it realistic to expect us to ignore all of that? It's like staying in the same town all of your life. That might be fine for some people, but for others, the more they travel the more they become addicted to the fascination of seeing new things for the first time. That first time you lean over the Grand Canyon, or your first Hawaiian sunset. One day our descendants will ask if people of the 21st century were claustrophobic about having to live on only one planet.

The next reason we go concerns resources. The peoples of the developing world will never attain a standard of living comparable to the advanced Western nations unless they have access to natural resources. Energy, metals, fresh water, etc. If we only continue to acquire our resources within the closed system that is our planet Earth we will eventually run out of many of those materials essential to an industrialized society. When resources become scarce people tend to squabble over what's left. Considering our species propensity for violence that could be a disaster for all of us. We need new inexhaustible resources, ones where we do not pollute our air or water trying to extract them. There is only one place where these resources exist in copious quantities and that place is off world. It sounds like sci-fi but it's really just a question of putting our minds to it and going and doing it.

Finally I can give the ultimate reason for continuing our journey into space, it is for the ultimate genetic need of all living species...survival. The dinosaurs not only lived but they dominated this planet for far longer than man has been around. They survived for millions of years. Overnight, they disappeared forever, the victims of a cosmic catastrophe. A giant asteroid plowed into the Earth and within a year, most species on the planet were wiped out on the land and in the oceans. It is not a question of whether another large rock traveling at 40,000 miles per hour will have our name on it; it is a question of WHEN. When that day eventually comes, will we be prepared for it? Or will we go the way of the dinosaurs, to be replaced by some other small animal that fills in the gaps left by those that die? The dinosaurs died because they did not have a space program. If the same happens to our species, who would be the least intelligent; the dinosaurs who didn't see what was coming and couldn't do anything about it, or us, who could see the potential consequences but chose not to do anything about them?

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