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Separation of Church and Space?: How Religion Shapes Our Views of Space—and May Shape Our Cosmic Future

Interfaith Lecture Theme: Searching for an Inter-Stellar Spirituality?

Through Science we no longer need religion to explain how the universe works. Do traditional religions, which have largely been earth-based belief systems, hold together when transplanted into outer space? Connection to our earth is a central value in all religions, while outer space is not fully theorized by these traditions. This week provides an opportunity to revisit how science, religion, and philosophy would strive to cohere in an inter-stellar context.

It's a real pleasure to be here. I want to thank Rev. Franklin and Maureen and everyone else at the Institution and the Religion Department for the invitation, the hospitality, & making my first Chautauqua visit so memorable. As my introduction said, I'm a social scientist who has done a little thinking and writing about how people view space—but I am also a "Red Letter Christian," a sort of ecumenical evangelical (if that's not too much of a misnomer)—that's why it's such an honor to be here the same week as Dr. Tony Campolo, who I understand grew up with some interests in science and astronomy. I'm hoping he finds the topic of this week fascinating and thought provoking—and that you all enjoy his messages as well.

Given that we're already talking about an unusual topic today, I'm going to do something this afternoon that might be a bit unusual for this lecture—I'm going to divide my talk into four parts. These parts will correspond roughly with an introduction, an overview of some of my work, some anecdotes, and finally conclusions and implications. This way you'll know what we've covered and what's to come. So let's begin...

Part I: Space Exploration as Worship

Let's start our time together with a brief meditative exercise, with your eyes open or closed—whatever works for you. I want you to picture the expanse of outer space. You're flying through it, with views of asteroids and planets and stars and galaxies and nebulae swirling around you. As you're absorbing these surroundings, recall the words of St. Paul to the Roman church: God's nature is revealed through the created order (Romans 1:20). Not just here on earth, but beyond. The ten trillion galaxies reveal God to us. The septillion stars display the Divine energy. And the countless planets tell us of God's creativity and love. As the Psalmist wrote: it is "the heavens [that] declare the glory of God; the skies [that] proclaim the work of his hands" (Psalm 19:1). Ponder the power necessary to mold a universe, or perhaps a multiverse, with stars equal to many times the sands upon the earth. And then this God populated this universe with solar systems that give rise to planets covered with liquid water—every ten drops of which has more molecules than the known universe has stars. And in this water—on at least one world, but undoubtedly many more—life arose and slowly adapted to the water and weather and eventually the land. In due course giving rise to us, to you, to me—with our abilities to learn and think, to speak and write, to dream and travel, eventually beyond this planet that gave us life.

I'm reading the first book of CS Lewis' space trilogy. In it, the kidnapped protagonist Dr. Ransom is at first quite dismayed to find that he's been drugged and taken off-earth against his will. Before he learns the horrible truth of his captors' plans for him, Ransom's demeanor begins to change. Lewis writes:

“Ransom, as time wore on, became aware of...[a] spiritual cause for his progressive lightening and exultation of heart. A nightmare, long engendered in the modern mind by the mythology that follows in the wake of science was falling off him. He had read of ‘Space’ (in quotes). At the back of his thinking for years had lurked the dismal fancy of the black, cold vacuity, the utter deadness which was supposed to separate the worlds. He had not known how much it affected him till now—now that the very name ‘Space’ seemed a blasphemous libel for this empyrean ocean of radiance in which they swam. He could not call it ‘dead’; he felt life pouring into him from it every moment. How indeed should it be otherwise, since out of this ocean the worlds and all their life had come? He had thought it barren: he saw now that it was the womb of worlds, whose blazing and innumerable offspring looked down nightly even upon the earth with so many eyes—and here, with how many more! No: space was the wrong name. Older thinkers had been wiser when they named it simply the heavens—the heavens which declared the glory...” (p. 34, *Out of the Silent Planet*).

Pondering the grand scope of creation fills me with an awe that I cannot help but call worship. Space exploration IS worship—or at the very least, an activity that preludes and inspires worship. Even the noted atheist Carl Sagan said space exploration inherently leads to religious questions. If you’re not convinced, take some time to Google the new images of the Orion Nebula captured by the European Southern Observatory. Breathtaking. Apparently I’m not the only person thinking religious thoughts when seeing these photos. One FB user felt the need to hit back, writing: “What's with all you people and your God references?! Do you have to make EVERYTHING about your delusional beliefs?! This is about SCIENCE, not RELIGION.” No, it’s about Science AND Religion.

I think that off-earth pilgrimages help (those of us who are Christians) to fulfill not only the first of Jesus' commands (to love God with our whole hearts) but also the second—to love our neighbors the way we love ourselves (see Matthew 22:36-39). You can look to the many comments of astronauts who detail the beauty of our planet without its arbitrary borders and divisions, and how this inspires them to cooperate globally on solving our deepest problems.

I'm not an astronaut. I'm not an astronomer. I'm not even a theologian. I'm a social scientist. So I'm going to spend most of my time today recounting what a scientist does best—and that is, asking and answering questions with data. We're going to talk about religion—after all, this time is set aside to ponder spiritual things. But we're also going to talk about science, social science, and even a little science fiction.

Sci-fi, after all, was probably my first introduction to outer space. It's been 20 years this month since the blockbuster film *Independence Day* hit theaters; and the sequel is of course out this summer. I think I saw the first during its theatrical run, but it wasn't all that memorable for me—I bet I was too busy that summer awaiting season 4 of the *X-Files*. But I recently saw that the original movie was available on-demand so I watched it again with my oldest son so we could prepare to see the sequel. He just loved it. So much that the next morning at church, when asked during Sunday School about the highlight of his summer, he of course said “watching *Independence Day*.” (Don't you just love it when your kids make you look like Parent of the Year?) When the movie ended, he asked me about the scene where there's a crowd of people gathered atop the U.S. Bank Tower in LA. I said, “I guess they're up there to welcome the aliens—probably hoping for some kind of religious or spiritual experience.” To which he replied, “If this was really happening, you love aliens so much that I think you would be right there with them.” I thought—“thanks son. In a movie full of heroes, you imagine me as one of the first people getting zapped!”

This got me thinking about how much religion plays into today's sci-fi blockbusters? *Independence Day* did feature the father of Jeff Goldblum's scientist leading a group of survivors in Jewish prayer. Another recent hit, *The*

Martian, you know the best comedy winner at the Golden Globes, had one overt religious reference—a small crucifix brought to Mars by an astronaut, which Matt Damon unceremoniously burns during his attempt to farm Martian soil. But there is also the unspoken spirituality of a man standing alone, taking in the virgin landscape of a planet that has inspired dreams and nightmares for hundreds or thousands of years. To me, thinking about space is religious—and exploring it: worship.

I don't want to go too far down this road, because I know Thursday's speaker, and editor of a book in which my work appears, Michael Walthemathe, has done some thinking and writing on space and worship.

So here I am. Invited to speak about religion and space during a week where we ponder the search for another earth and how that search can inspire an "interstellar spirituality." How did I become somewhat of an authority on this intersection of religion and space? Well, I—like countless scientists before me—became curious about a question and used the methods of science to answer it. These methods will help to gauge if other people of faith see space as spiritually as I do.

Part 2: Separation of Church &...Space?

(That's with a question mark—special thanks to former University of Dayton media relations director Cameron Fullam who came up with this great phrasing!)

The question I sought to answer in my research is: *How might religion affect people's interest in or views toward space exploration?*

I actually dreamed up this project about 5 years ago, but didn't finish until being spurred along in 2014, particularly after watching the film *Interstellar*, a movie about the imperative to colonize other worlds after our planet's complete environmental collapse. I think I actually finished my paper after getting home from the theater at about 1 AM!

So, if I'm going to ask such a question, "How does religion affect the way we see space?," like any scientist, I had to define the key concepts in measurable ways. We call this "operationalizing" them. (Don't worry I'll keep the research methods brief and we'll get to the good stuff quickly.)

Religion is a fuzzy concept, right? It means many things. Like something else referred to by a certain Supreme Court justice, one textbook I've used says of religion: "You know it when you see it." Political scientists studying religion usually think about the 3B's—belonging to a particular tradition, behaving in a certain way (like worship attendance or prayer), and believing (usually conceived of as traditional versus modernist beliefs). We also think about religious salience, the importance that one places on faith. Other contemporary scholars think it's more important to look at the impacts of actual messages congregants receive, inside and outside of church. I use all these measures of religion.

The way I measured support for space would be in part determined by the datasets chosen for the project. I decided to analyze public opinion data from four nationally-random surveys of the U.S. adult population: the General Social Survey and three Pew Research Center surveys, which were together given to over 7,000 Americans during a 2-year period between April 2009 and June 2011. I settled on seven conceptions of space support:

-knowledge of outer space, interest in space, support for funding exploration, recognition of the benefits of exploration (in general & to the nation), space nationalism (that is, wanting the US to be #1 in space), and expectations of our future accomplishments in space.

I cannot do justice to the breadth of the study here, but I will briefly summarize the findings. If you'd like to explore further, please do ask questions when the time comes or read the full study, available from me or in the journal *Space Policy*. A summary similar to what follows also appears in the book, *Touching the Face of the Cosmos*.

Now on to the good stuff—you want to know what I found, right?

The most significant findings from my study show that evangelical Protestants [my own tradition] are, across the board, less interested and knowledgeable about space and less supportive of space exploration than other types of Christians and followers of other religions. In particular, evangelicals—defined here as non-Catholic Christians who have had a “born again” conversion experience—rank consistently, significantly lower than the rest of the population on five of the seven space variables: knowledge, funding support, space benefits (general *and* national), and optimism.

Mainline Protestants, Jews, members of Eastern traditions like Hindus and Buddhists, and those with no religion all score significantly higher on space knowledge. Followers of Judaism and the Eastern traditions, as well as religious “nones,” all stand out positively on perceptions of general space benefits. Eastern traditions and the nones also rate higher on support for space funding. Finally, Eastern traditions are most interested in space and Catholics, in their one distinctive category, are higher on space nationalism—that the U.S. should lead the way.

Evangelicals further express a sort of “space pessimism”—that is, lower expectations of future achievements related to space over the coming 40 years. Evangelicals hold higher expectations that an asteroid will hit the earth during this time, but lower expectations of the discovery of life away from earth. Evangelicals do not differ statistically from others, despite being lower on average, in expecting advances in space travel—including non-astronauts completing space tours and boots on Mars. In perhaps the most interesting finding, evangelicals are much surer that Jesus will return to the earth in the next four decades than the rest of the population, and than they are about the four space-related events occurring. For all other traditions, the likelihood of Jesus’ return rates lowest of the five items. For evangelicals, it is the highest with a mean response between “probably” and “definitely” occurring. All other traditions’ averages hover around “probably not” occurring.

So, what about the other measures of religion besides belonging? Worship attendance is negatively related to nearly all space variables—meaning, greater presence at church may in some way discourage support for space. Traditional understandings of the Bible, running from ancient myths (modernist belief) to the Word of God (traditionalist belief), are negatively correlated with knowledge, interest, and funding support. These same space measures are positively correlated with acceptance of biological evolution (the inverse of creationist accounts of our origins). Religious salience, in which higher values represent greater religious importance, is also negatively associated with several measures of space support.

In an interesting twist, the support of one's clergy member(s) for science exerts a significant positive effect on support among the most skeptical religious group, evangelicals—making them twice as likely to recognize the benefits of space exploration *if* they report a perception that their minister speaks positively about science in general. If an evangelical's pastor speaks negative about science, the probability of agreeing with the statement "space exploration does more good than harm" is 47%, holding other factors equal. If an evangelical's pastor speaks positively, the probability shoots up to an impressive 96%.

While the initial intention of the study was to equally examine all religious traditions measured by the surveys, evangelicals quickly emerged as the standout group and became a focus of the study. (Not to mention that it's my own tradition...) My claims of this tradition's lower support for space are based in the scientific analysis of thousands of survey respondents—not subjective or anecdotal reasoning. These reliable conclusions present a clear problem for the future of space exploration because evangelicals make up more than one-quarter of the U.S. population, by affiliation with evangelical churches (even higher when identified by a salvation experience), and thus a significant share of potential space-minded constituents (or the converse, critics). Because many advocates for space exploration, such as the late Carl Sagan, science apostle Neil deGrasse Tyson, and the Planetary Society's CEO Bill Nye the Science Guy are seen as anti-religious by many, the effort to recruit evangelicals to the space cause will be an ongoing challenge. Now that you've heard the data, let's get to a few anecdotes.

Part 3: Stories

If you look at my CV, you'd think I was speaking during Week 6—"religious voices in the city," which looks like it's really going to be a great week of lectures by the way. Most of my work is related to urban policy and politics—sometimes with a connection to religious actors. But I've always had a side interest in religion and politics—I say side interest, but really—religion is where my heart is. I try to bring it in to much of what I do—for example, my dissertation was on support for a city-county consolidation referendum in Louisville, Kentucky. What did I do? I developed a new theory about how religious institutions could shape preferences for the design of local government structures and tested it. I call that theory "polity replication."

Enter my space research. What began as a true side project connected little to most of my other work, became the most interesting research of my career thus far—at least to the public. News outlets including *The Atlantic*, *The Week*, *Religion News Service*, *Catholic News Service*, and *Space.com* (twice!) interviewed me or ran stories about this work. I got my first hate mail submitted on my university webform—asking why I'm wasting my life caring what religious BLEEPs think. I was even attacked in two (not *one* but *two*) blog posts put out by Ken Ham and his "Answers in Genesis" ministry! A Facebook friend put it best after that last one: "you have arrived!"

Ken Ham—you know him for his Creation Museum in Kentucky, his creationism vs. evolution debate with Bill Nye in 2014, and now his construction of a large Noah's Ark theme park, made possible by the dubious use of donated and public funds. While I don't exactly thank Ham in my paper, I should give him credit for helping me frame it.

Ham posted a blog in July 2014 responding to a NASA panel discussion where astronomer Kevin Hand exclaimed that, "in the next 20 years we will find out we are not alone in the universe." Ham wrote:

“I’m shocked at the countless hundreds of millions of dollars that have been spent over the years in the desperate and fruitless search for extraterrestrial life...[S]ecularists are desperate to find life in outer space, as they believe that would provide evidence that life can evolve in different locations and given the supposed right conditions! The search for extraterrestrial life is really driven by man’s rebellion against God in a desperate attempt to supposedly prove evolution!”

Ham argues that the search for alien life or other habitable environments is pointless because God uniquely created earth and the life found here. Media accounts immediately reported that Ham said, “aliens probably don’t exist—and if they do, they’re going to Hell anyway” in response to Ham’s claim that, “Jesus did not become the ‘GodKlingon’ or the ‘GodMartian’! Only descendants of Adam can be saved.”

My use of Ham’s above comments and my discussion of his views with members of the media apparently necessitated a personal response from both Ham and his ministry’s resident astronomer, Dr. Danny Faulkner. Ham attempted to rephrase his original contentions about space exploration, arguing that Christians can be interested in the heavens (citing Psalm 19:1) but that the fruitless search for extraterrestrial life defies a true Christian worldview. He revels in the continued failure of scientists to discover life elsewhere in the universe, writing that—in a perverse way—the search for ET benefits his cause:

“Really, the search for extra-terrestrial life has had a benefit for creationists! The more the secularists search for alien life, the more they find no evidence of such anywhere in the universe. This is just what we would predict based on the Bible’s account of origins and an understanding of the gospel. Biblical creationists do not accept evolution [or] intelligent alien life...because we do not accept the humanistic worldview behind these ideas.”

Ham also disagrees with the claims by Bill Nye and I that he denies climate change science. We have it all wrong, he says—he does believe the climate is changing. It’s just due to the residual impacts of Noah’s flood and there is nothing we can do about it, so don’t even try. Hence, many are worried about what this Ark is teaching our kids—Nye included, who had another impromptu debate with Ham a few days ago.

Dr. Faulkner vigorously defended Ham’s original comments in another blog and argues that Ham was “falsely accused” of believing aliens will go to hell (because of course, they don’t exist). Faulkner attacked my scientific findings that traditional beliefs and church attendance *negatively* influence support for space, stating that these claims are “condescending”—implying that these “once-respected practices and beliefs are harmful to society”—but he added that my assertions are “not as hostile as...Richard Dawkins and Bill Nye.” He concluded by declaring his own love for space, couched in a call for unmanned exploration over costly manned missions:

“As a professional astronomer who grew up during the Apollo program, how could I not like space exploration? I have some strong opinions of the directions that some space exploration has taken, but those opinions are based upon knowledge and passion...I have found that as a whole, most biblical creationists support space exploration. Our motivation to study the creation is that we understand that the world is not the result of random chance, but that God purposefully designed it.”

On the other end of the spectrum, a rising star within the Charismatic movement was recently publicly rebuked for embracing unconventional beliefs and practices by a leader within the same tradition. *Charisma News* reports that Bill Johnson, pastor of Bethel Church, a megachurch in Redding, California, rebuked “popular prophetic voice” Jason Westerfield from the pulpit. Johnson’s sermon in April 2015 claimed that Westerfield was under a “spirit of deception” and a “demonic impartation.” Filmmaker Darren Wilson wrote that Westerfield has veered into “very odd and bizarre territory”—including “aliens [and] interplanetary travel.” Westerfield’s own website describes him as a “visionary leader, public speaker

and world futurist” who “is currently working on outer space-related issues and policies for mankind’s future in space.” Writing for *Charisma News*, Wilson asks the question, “What does any of this have to do with the gospel?”

Perhaps Wilson’s question is the real hurdle for some religious believers, particularly evangelical Christians. But then again, this cannot be the true hurdle—because what does politics have to do with the gospel? What does amassing earthly wealth have to do with the gospel? What does much of what we do here on earth have to do with the gospel?

Another benefit of having your research picked up by the media is being contacted by interesting people—from ministers, directors of astronomy clubs, to even a SpaceX engineer excited to better connect his faith to his work. I maintained correspondence with one such person for some time.

This non-denominational Christian from Philadelphia, who works in the shipping business, believes that God is calling him to teach the Body of Christ that the colonization of other planets is intimately related to the gospel. He leads a monthly Bible study group of 15-20 Christian men who were brought together by their common interests in God’s Word and sci-fi like Star Wars and Star Trek, in a study of “InterGalactic Dominion.” This teacher hopes to inspire these men and more to become “householders” (*oikodespotés*, or oy-kod-es-pot'-ace, in the Greek)—essentially interstellar pilgrims who “will unite the men of theology, men of industry and men of science together in one common purpose,” the colonization of new worlds. He hopes that his group, which he has named the Dominion Institute for Advanced Authority Studies, will grow into a Christian think tank to bring together experts who dream about space exploration with those who can make it happen.

For him, space exploration is the culmination of humanity’s destiny—our ultimate fulfillment of God’s call for us to exert dominion over creation. He interprets the fall of Adam as an event that stripped humanity of its heavenly nature and thereby restricted our authority to a single planet. It is the task of the coming householders to prepare “a large upper room” (Luke 22:12/Mark 14:15) in the heavens through colonization and terraforming. In a document sent to me, he

extrapolates from this passage, in which Jesus tells his disciples to locate second-story accommodations for the Passover supper, that future householders will “exhibit, teach, demonstrate, make known to, and expose the eyes of the apostles to cosmic regions above and beyond the earth,” places or planets “that have not yet been made ready for the Lord.” This mission was foreshadowed, prior to the fall, in God’s mandate that we “have dominion over...the fowl of the air...” (Genesis 1:26). He believes this phrase refers not just to birds, but any “flying or winged thing” (*oph* in the Hebrew)—including planets and spiral galaxies that hurl through space.

Part 4: Tomorrow & Beyond

Scott Kelly, the astronaut who spent almost a year on the International Space Station, recently spoke in Dayton, Ohio. He talked of the impact that over 5,000 orbits around the earth had on his body but also his mind—about how the way he saw the planet and its inhabitants evolved. Like many space travelers before him, leaving earth and gazing down on it gave him a greater appreciation for our environment. They take great care, Kelly said, of the atmosphere on the ISS because it was the only thing keeping passengers alive. How much more, he asked, should we take care of the thin layer around spaceship earth that keeps our whole species alive? Kelly learned to live with so little for so long, he’s striving to do the same back on earth.

Let’s not make the mistake of seeing space exploration as detached from earth. The space program has led to countless life-changing inventions for earthlings—including satellites and GPS, solar panels, water-purification systems, and numerous advances in healthcare; even invisible braces, scratch-resistant lenses, and the Dustbuster! Kelly also noted that money spent ON space is not spent IN space—most money spent on space funds jobs in our communities on earth.

Space exploration has even improved international relations—look at the US-Russian relationship. It’s much better in space than down here! Scott Kelly’s Russian co-traveler stated it this way: when there is tension between our presidents, we should stuff them together in the ISS until all our problems are smoothed out!

Or recall Edgar Mitchell’s famous sentiment—he spent over 200 hours in space and walked 9 hours on the lunar surface and said this, “You develop an instant global consciousness, a people orientation, an intense dissatisfaction with the state of the world, and a compulsion to do something about it. From out there on the moon, international politics look so petty.”

Some of you, though, might be skeptical of the value of spending immense sums of money on space. The late activist and mayor of DC Marion Barry wondered in 1969, “Why should blacks feel elated when we see men eating on the moon when millions of blacks and poor whites don’t have enough money to buy food here on earth?” More recently, Democratic presidential candidate Bernie Sanders echoed the same sentiment [you didn’t think you could invite a political scientist without him mentioning this circus of a presidential election did you?]. Sanders said that he is generally supportive of space policy but that we must make “very difficult choices about whether [to fund NASA or] provide food for hungry kids or health care for people who have none.”

Or take GOP presumptive nominee Donald Trump—who busted a ten-year-old’s space bubble when he told him that “right now, we have bigger problems...[that] we’ve got to fix our potholes.” Despite Trump’s indication that our children should deflate their astronaut aspirations—which coincidentally also happened to a pre-teen Hillary Clinton due to her gender—NASA’s most recent solicitation resulted in more than double the previous record from 1978 for the most astronaut applications. So it would appear that the next generation still loves outer space. Even the unlikely-to-happen, one-way-trip to Mars planned by Mars One attracted over 200,000 interested participants—that’s more than show up to audition for *American Idol*! And there all you have to do is sing in front of a crowd—here, you die on Mars while your family watches back home!

So what are we to make of all this? We began by emphasizing the spiritual side of outer space. Then we looked at the reality of how religious traditions, beliefs, and behaviors shape views of space exploration. Many traditions are very supportive I found—Jews, Hindus, Buddhists, anecdotally Muslims and Mormons (although I was lacking data to test) and for the most part Catholics & Mainline Protestants, and certainly the non-religious. But then you heard some stories about how a few members of the most skeptical tradition, evangelicals, view space—some quite critical like Ham, some going too far. Finally, we are dreaming about tomorrow.

If you think space exploration is fascinating, beneficial, and an essential step for our future & survival, then wonderful. I do too.

But if you agree more with Barry, and Sanders, even Trump, then great too. Yes, there is much to do here on earth—as the past few weeks of turmoil have definitely shown us. But as Dr. Ransom, and Scott Kelly, and the testimonies of many others reveal, space travel does wonders for the soul—and I believe will do wonders for the collective soul of humanity.

We have much momentum pushing us toward Mars and beyond. But then again, we've had this before and it faded. We must take the few small steps now that will become giant leaps in our childrens' generations. Yes, reasonable people will (and should) disagree. But I never want to see religion, especially my own, become a stumbling block to progress in this area. If it's true that our survival will one day depend on colonizing off-earth environments, as great minds like Stephen Hawking have suggested, then we must begin sooner rather than later. One-planet species will not weather the ages.

Let us end with a Bible story.

Recall the Tower of Babel from Genesis 11. Rebellious people gathered at Babel and attempted to build a great tower into the heavens. To scatter them throughout the earth, basically in order to replenish the population after the flood, God created languages that prevented them from coordinating with one another. He remarked, "Indeed the people are one...nothing they plan to do will be impossible for them." (Gen. 11:5-6). God speaks the truth.

My son and I eventually went to see the *Independence Day* sequel. Despite being universally panned by reviewers, we enjoyed it. One of my favorite scenes was when the president noted that the 20 years since the first invasion saw unprecedented international cooperation. Without this, the second invasion would never have been fended off.

We cannot afford to have the great religions of the world take on the role of languages in the Babel story, keeping us from the goal of reaching the heavens this time. I think we can do it without worshipping the creation or science and without incurring divine wrath. We must build on the incredible dialogue between religion and science in other areas like biology.

You can look to the great work being done by BioLogos, founded by NIH director Frances Collins—an organization that educates evangelical believers about how their biblical beliefs and evolutionary science can coexist. Or the Perceptions Project of the American Association for the Advancement of Science—seeking to spur dialogue between scientists and faith communities by dispelling myths of a conflict.

I think we can find ways to educate religious believers, particularly evangelicals, on space and the benefits of space exploration so we can overcome the deficits found in my study. [If anything, I'm sure my evangelical brethren will get onboard once they can evangelize space colonists!] Remember, members of the clergy—positive sermons on science can go a long way! I documented these effects—a doubling of appreciation of space exploration among evangelicals. I think we, as a society, can invest more in space exploration—and do it at the same time as we work to stamp out hunger and curb climate change.

I'm generally an optimist. Yes, many Christians believe the second coming of Christ is imminent. But that doesn't mean we should sit on our hands waiting for a rapturous ascent to the heavens. We have the means to do that now—and SpaceX, for one, is learning how to reuse these means. I'm not at all suggesting we act as Nimrod, spiting God (as older traditions took the Babel narrative). I'm suggesting we do this to better know and love our Creator, our earth, and our fellow human beings.

Martin Luther reportedly remarked, "If I knew that tomorrow was the end of the world, I would plant an apple tree today!" While it's highly unlikely he said that, given that I read it didn't circulate until the 1940s, it's nonetheless a great sentiment. Here's to hoping that our children and their children and their children's children will live with the same spirit—whether the planting is on earth or Mars or a floating green house in the heavens.

Thank you...