

Article

# The Missing Orientation

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**Abstract:** Humans last walked on the Moon in 1972. We not only have gone no further with in-person expeditions to places off Planet Earth, we have not even been back to the Moon. The main motive for getting to the Moon back then, Cold War competition, may have subsided, but competition for economic and scientific advantage among nations has continued, and has failed to ignite further human exploration of worlds beyond our planet. Nor has the pursuit of science, and the pursuit of commerce and tourism, in their own rights. This essay explores those failures, and argues for the integration of a missing ingredient in our springboard to space: the desire of every human being to understand more of what we are doing in this universe, why we are here, our place and part in the cosmos. Although science may answer a part of this, the deepest parts are the basis of every religion. Although the answers provided by different religions may differ profoundly, the orientation of every religion is to shed some light on what part we play in this universe. This orientation, which also can be called a sense of wonder, may be precisely what has been missing, and just what is needed, to at last extend our humanity beyond this planet on a permanent basis.

**Keywords:** philosophy; religion; sense of wonder; space exploration



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For, after all, what is man in nature? A nothing compared to the infinite, a whole compared to the nothing, a middle point between all and nothing, infinitely remote from an understanding of the extremes; and the end of things and their principles are unattainably hidden from him in impenetrable secrecy. Equally incapable of seeing the nothingness from which he emerges and the infinity in which he is engulfed . . . (Pascal 1699)

I do not recall reading or hearing any references to Pascal's *Pensées* when Neil Armstrong and Buzz Aldrin walked on the Moon three hundred years later. But I bet millions of people around the world were thinking and feeling, without reference to Pascal, how this brief, in-person visit to the Moon was slightly equalizing this endemic imbalance between the human being and the immensity of the cosmos, how Armstrong and Aldrin embodied a small but momentous step towards bringing the human enterprise into the infinite above and around us.

Ironically, such thoughts are as difficult to easily communicate and discuss as they are profound to our existence. Military superiority, commercial advantage, even scientific accomplishment are far more tangible and amenable to measurement and assessment. So, we Americans took justified satisfaction in beating the Soviet Union in the "race" to get to the Moon, which was the primary motive, all along, of the Apollo program which got us from the ground of Earth to the lunar surface. And for those Americans and people around the world who did not care all that much about American military advantage, NASA touted all the scientific dividends that our sojourns off this planet would and could bring back to us.

But science, for most people, is not as sexy or adrenaline evoking as military competition or any kind of big, international rivalry. And when our very success in getting to

the Moon removed the military motive in getting there, because our competitor, the Soviet Union, had been so decisively defeated, the scientific motive was unable to sustain an increase or even a steady level in our progress in space, in the face of the opposing sentiment here in the United States that taxpayer money would be better and more wisely spent addressing problems here on Planet Earth.

As the decades since the 300th anniversary of Pascal's book ensued, commercial development of space exploration took hold in the United States. SpaceX (more properly Space Exploration Technologies Corporation), commenced by Elon Musk in 2002, carried astronauts to the International Space Station in 2020, signaling not only a partnership with NASA but an intended gradual supplantation in the United States of government-funded space exploration by private industry. The People's Republic of China has continued to rely on government funding, and it plans to put up a Chinese space station in 2022, and subsequently missions to the Moon with astronauts. A variety of nations have sent probes to Venus, Mars, and beyond with no people aboard.

But since people last walked on the Moon in 1972, that natural satellite has seen no visits from human beings. Neither science, nor commercial daring, nor global rivalry among the United States and its competitors has brought people back to the Moon, or to any planet or heavenly body further out in space.

This essay looks into whether that failure may be due, at least in part, to a lack of focus on, and articulation of, a motive for space exploration consistent with Pascal's vision about our place in the universe, how we humans fit in this immensely greater and largely still unknown expanse. This vision has little to do with international rivalry and commercial interests, and is not adequately addressed by science. But it is the driving force of just about every religion (see [Levinson 2003](#), pp. 99–110, and [Levinson 2015](#), pp. 1–3 for more on a religious motive for space exploration).

## 1. The Sense of Wonder in Religion

You will not find a word about human exploration of outer space in the sacred texts of any major religion (more specifically, none in the top 21 religions in the world in 2015 listed in descending order in [Wikipedia \(2020\)](#), from Christianity with 2.3 billion adherents to the Rastafari with 0.6 million), unless angels are literally or figuratively beings from another planet or solar system, which they most likely are not. The Vatican is not planning on sending a crewed spacecraft or any kind of space vehicle to the Moon or anyplace else off our planet any time soon, notwithstanding the pivotal role of Jesuits in science fiction classics *A Case of Conscience* ([Blish 1958](#)) and *The Sparrow* ([Russell 1996](#)). Indeed, after a conference at the Jesuit institution Fordham University in April 2018 about space travel and religion, keynote speaker Guy Consolmagno, SJ, aka "The Pope's Astronomer," mentioned that the Vatican has all it can do to fund the Vatican Observatory, of which he was appointed Director in 2015 ([Consolmagno 2018](#)). What is easily funded by NASA and similar agencies in Russia, China, and the European Union if they have the support of their respective governments and citizens, and by billionaires like Elon Musk who founded and is CEO of SpaceX, is beyond the reach of the largest church (1.3 billion people) of the largest religion (more than two billion people) on Earth: the Roman Catholic Church. So, what do I mean when I say that the affinity of religion and space travel could be the missing, untapped intellectual springboard and spiritual fuel needed to more reliably lift us off this planet and touch the infinity of the cosmos?

I am talking about the sense of wonder, which is most commonly associated with science fiction but is also in the deep tissue of religion. Science fiction itself is often dismissed as juvenile, vacant adventure, which some of it is, but that depiction misses the profundity of numerous works, ranging from Isaac Asimov's *Foundation* trilogy ([Asimov 1951–1953](#)), which explores the question of what would happen if we could scientifically and accurately predict the future, to Olaf Stapledon's *Star Maker* ([Stapledon 1968](#)) which almost could have been written by Pascal, and ultimately is itself a religious text (the *Star Maker* is the Deity).

Indeed, science fiction on its own, in written, cinematic, and televised form, has ignited abiding interests in space travel. I first became a devotee of space travel watching reports of everything from Sputnik to John Glenn on television when I was kid. But my lifelong commitment to doing what I could via writing and speaking to help lift our species off this planet was baked in for life by *Star Trek* in the mid-1960s.

But if science fiction has that power, why has it not propelled more people further into space since the Moon landing in 1969? Unfortunately, though it is appreciated and lionized by millions of people around the world, it does not have the sway and standing of religion, and its fans are far less numerous than the billions of people on Planet Earth who adhere to one or another kind of religion, or who ponder even once in a while about our place in the Universe, or wonder what it is all about.

## 2. The Facts on the Ground and the Truest Believers

But what evidence is there that religiously minded people, of any faith or even no particular organized faith at all, are likely to have a special, keener appreciation of the need to get off this planet and out into space?

A very preliminary study conducted in 2010 suggests some answers. For his Masters thesis in the MA in Public Communications at Fordham University, under my tutelage (the thesis subject was his idea), Frank Borzellieri surveyed over a thousand Americans with the question of whether they believed in the so-called Roswell UFO Incident, in which it was (and still is) alleged that an extra-terrestrial spacecraft crash landed on a ranch in Roswell, New Mexico in 1947. The participants were asked about the intensity of their belief, if any, in the alleged extra-terrestrial visitation, and a wide variety of demographics including their educational level, political leanings, and religious beliefs and affiliations.

The results on the religious question were instructive: The group with the highest level of belief in the Roswell incident were those who identified themselves as “spiritual, but no specific religion” (47.8 percent of that group said they thought that Roswell was very likely or they were certain it happened, and only 14.6 percent of that demographic thought that Roswell was unlikely), in contrast to the demographic with the lowest level of Roswell belief, the “atheist/agnostic” group (only 19.9 percent of whom believed extra-terrestrials were at Roswell, and 42.1 percent of whom strongly doubted it) (Borzellieri 2010, p. 45; see also his book of the same name, developed from the thesis, *Who Believes in Roswell?* (Borzellieri 2011)).

Aside from this stark contrast between religious belief and non-belief as pre-requisite or foundation for belief that a space vehicle not of this Earth landed at Roswell, Borzellieri’s survey is also significant in that people with just a “spiritual but no specific” religious belief were the most likely to believe in Roswell. Catholics clocked in next at 34.9 percent believing in Roswell, followed by Protestants at 27.3 percent, and Jews at 22.2 percent—less than the “spiritual” believers at 47.8 percent and more than the atheists/agnostics at 19.9 percent. (Hindus and Muslims each comprised only 0.5 percent of the respondents, not enough to draw statistically significant conclusions about their beliefs in Roswell.)

This, I would say, uncovers what could be a crucial aspect of human thinking and space exploration: to wit, a more general sense of wonder, i.e., “spiritualism” or in this case a general belief or orientation that there is more to understanding who and where we are in this universe than what just science can disclose, is more likely not only than “spiritless” atheism to help get us off this planet, but, to a lesser but still notable extent, the strictures of, or adherence to, any organized, formalized religion.

But does belief in extra-terrestrial involvement in Roswell—which, for all we know, may well be the US Air Force balloon crash that the authorities claim it to be—equate to support for getting spacecrafts with humans out beyond the Moon to the planets and ultimately other star systems beyond? Certainly a visit from spacefarers not of Planet Earth would provide all kinds of pressing reasons for getting out there, ranging from security and survival, in preparedness for a possible interstellar attack on Earth, to sheer curiosity.

Joshua Ambrosius's (2015a, 2015b) work directly addresses the connection between religious belief and passion for space exploration, is statistically more sophisticated than Borzellieri's survey, and in general has conclusions about humans in space that agree with Borzellieri's about extra-terrestrials in Roswell.

Ambrosius surveyed over 7000 Americans on the correlation of their religious beliefs with some seven aspects of space support: knowledge of space endeavors, interest in them, support for space funding, appreciation of the benefits of exploration, space nationalism, and optimism about future accomplishments in space. He found, and thought this most significant, that Evangelicals were "less interested and knowledgeable about space and less supportive of space exploration than are other types of Christians and followers of other religions" (Ambrosius 2015b, p. 21). Indeed, those professing adherence to no religion ("religious 'nones'") showed greater commitment than did Evangelicals to the nearly Herculean effort of getting humans beyond Planet Earth. (Again, Muslims, and in this case, Mormons, were surveyed in insufficient numbers to have statistical significance in this study.) At first glance, this might seem to contradict Borzellieri's finding that atheists/agnostics ranked lower than any religious believers. But if the "nones" or people with no professed religious affiliations include the "spiritual but no specific" religious believers surveyed by Borzellieri, then the two results of the two surveys are very much in accord. (See also Ambrosius's 2020 "reexamination" of "church and space" with a survey that shows an increase in Evangelical support for space exploration.)

And, looked at from the top-down rather than the bottom-up in rankings, Ambrosius's findings coincide with Borzellieri's in a related way: both suggest that intense or devout commitment to any organized religion is not the most likely to help physically lift us off this planet. Rather, both suggest that it is neither denial of the spiritual essence of existence (atheist) nor strict adherence to any specific, organized way of understanding that essence (follower of a major religion) that is the missing path to space. It is, rather, the sense of wonder, which apparently is deeply buried in the literalism of Evangelicalism, but closer to the surface in the symbolism of other religions.

Can it be brought closer to the surface or recovered in atheism?

### 3. The Challenge of Atheism and Space

It seems that there is some confusion about atheism and agnosticism. I was on a panel at a science fiction convention several years ago, discussing the then-recently published *Touching the Face of the Cosmos: On the Intersection of Space Travel and Religion* (Levinson and Waltemathe 2015). When question-and-answer time arrived, someone from the audience asked each of the panelists to identify their religious affiliations, if any. I replied that I was Jewish, culturally (meaning I enjoy the holidays and traditions with family and friends), but not theologically, by which I meant and briefly explained that on the question of God, I was somewhere between agnostic and deist. One of the other panelists then offered an opinion that "agnosticism is just a cop-out—just say you're an atheist if you don't believe in God".

I disagreed. Atheism is a flat-out denial that there is some sort of force, whether Aristotle's and Aquinas's Prime or Unmoved Mover, or continuing intervener, in the Universe. I am more of the belief that we humans may not have the capacity, even via our ever-evolving, ever-improving science, to knowledgeably answer that question, to make that choice between Prime Mover or continuing evaluator, or even evaluate the enigma of the Prime Mover, which amounts to, in effect, if the Universe began with the Big Bang, what caused the Big Bang to happen? Not having an answer to this question, and believing that science per se will never have one, either, leads me to be not an atheist, but an agnostic leaning towards deist, in which one way of describing that deity is a big question mark.

Interestingly and perhaps significantly, I would argue that such an agnosticism tending towards deism puts me more in Borzellieri's "spiritual, but no specific religion" than his "atheist/agnostic" category. But, if I had to wager real money on Roswell, I would put my chips down on it not being an extra-terrestrial port of call that went badly. To be clear, I do

think it very likely that there is intelligent life capable of interstellar travel in the Universe. But I will not believe it for a fact unless its vehicle lands in Times Square or the equivalent, on New Year's Eve or any time in which it is crowded with observant people and media.

But if I as an example with my parcel of beliefs contradict Borzellieri's specific findings about religious beliefs and Roswell, they reinforce my extension of his findings to support fervor for space exploration, and Ambrosius's findings that no religious preferences score higher in favor of space than do Evangelicals.

The gist of all of this is that appealing to people's sense of wonder as a way of igniting their acute and continuing interest in space need not be limited to the sense of wonder inherent in all religions. Religion is a good catch-all for sense of wonder—which includes feelings evoked not only from contemplating and viewing images of outer space, but by regarding objects that are closer to home, such as the Grand Canyon or even the clean-cut Palisades—precisely because religion is institutionalized in many cases and places, and ritually practiced on Saturdays, Sundays, and sundry religious holidays. But that connection of space exploration to sense of wonder can also be drawn forth in agnostics and even atheists, however focused they may be on making improvements here on Planet Earth.

#### 4. Getting the Word Out

Many have already concluded that the lack of progress we have thus far made in getting people beyond the Moon is an indication that we will never get much further. Andrey Miroshnichenko (2013) contended that “even a manned mission to Mars is very questionable . . . the success of the space exploration was driven by the military . . . [which is] why it never really went beyond Earth orbit . . . Space exploration as a technologies development track is essentially a dead-end track. It has already served its historical purpose by creating the environment for development of computers, materials, communications.”

Even if we count the likelihood of Elon Musk's SpaceX getting humans to Mars as at least a refutation of the first part of Miroshnichenko's prediction, the pillars of his argument remain intact. The military motive is long gone, and I say this notwithstanding the recent October 2020 announcement that Musk will be working with the U. S. Military to develop a capacity to deliver weaponry anywhere in the world within an hour via a new 7500-mph rocket (Duffy 2020), or Donald Trump's much touted U. S. Space Force, which at this point is less than a year old, with a future that may or may not survive the results of the 2020 U.S Presidential election. Meanwhile, although China is on the verge of replacing Russia as the main national competitor to what is left of the U. S. space program, the competition between China and the United States is now, thankfully, mainly economic not military. And the immediate scientific benefits of getting further out into space, never that powerful a popular draw in the first place, have already been apparently satisfied, as Miroshnichenko notes.

Connecting the space program to the sense of wonder described in this essay may be our last hope, our best and only hope for getting permanently out into space. Sense of wonder lurks in many places in addition to religion and science fiction. It of course is not lurking but paramount in the inspired people who work for NASA, SpaceX, and space programs around the world, including astronauts who have had life-changing personal experience in the cosmos beyond our planet (see O'Neill 2008). It is also an implicitly driving force in astrobiology, or the search for life and the origins of life off this planet (see Longo and Damer 2020), which has profound implications for any religion. But sense of wonder in one form or another needs to be connected to space in a much larger percentage of the billions of people who inhabit our globe. Sense of wonder is more present, certainly closer to the surface, in children than adults (Vozick-Levinson 2015; see also Freud 1913 on the aesthetic kinship of children, artists, indigenous peoples, and neurotics). The question is how to keep it there, when children become adults.

Sense of wonder is also present in philosophy, from which science emerged from its longstanding home known as natural philosophy less than two hundred years ago. Pascal was both a natural and an intellectual philosopher, which is to say in today's

parlance a scientist and an epistemologist. Galileo and Newton are considered scientists today, but in their days were natural philosophers. There of course today are far fewer professional philosophers of any kind than there are scientists, so appealing to them as guardians and conveyors of sense of wonder cannot be not a straightforward strategy for increasing numbers of people who could support vigorous space programs. But every bit helps, and philosophy has a way of attracting original thinkers, is a natural bridge between religion and science, and can help awaken the sense of wonder often dormant or ignored in workaday science.

But there are limits to where we can find, marshal, and satisfy more sense of wonderment. It is not something that remote, virtual connections and robots can fully do for us. As we have seen during the 2020 Covid-19 pandemic, distance learning, remote shopping, and digital family gatherings can save lives and are a lot better than nothing. Indeed, classes taught via Zoom or conducted through asynchronous digital forums have some significant advantages over in-person education, including anyone in the world being able to take a course with a professor in New York without leaving their homes (Levinson 2020a, 2020b). But these virtual classes lack the ineffable energy of the in-person classroom, and shopping for fruits and vegetables online does not allow the touching, hefting, and even sniffing of cantaloupes which not only my grandmother did but many discerning grocery shoppers still do (Levinson 1994a, 1994b), and nothing compares to hugging your grandchild. As for robots, they certainly can collect worthwhile samples on distant worlds and via rocketry bring them back to us. But as conveyors of first impressions of off-world encounters, real robots do not cry when they come upon exquisite beauty (Levinson 2003, pp. 122–35), and that is to their detriment and our loss. The notion that we do not need to go there—do not need to go out into space ourselves, because our digital and robotic surrogates can do it for us, and without jeopardizing human lives (e.g., Roland 1994)—is certainly true regarding risk of astronaut lives, but misses the unique dividends that only the human sensorium connected to the human brain/mind/soul (take your pick) can provide. Sense of wonder is a rare property of intelligent life, with both parts of the possessor, intelligence and life, being required.

Ambrosius (2015b, p. 27) concludes his essay with a plea taken from Jon D. Miller (1984) that “We must build upon the ‘attentive publics’ in many of the great world religions and stitch them together as we embark on the greatest project humanity has ever pursued.” The “we” means space enthusiasts like him and me, and the scientists, technicians, engineers, astronauts, and everyone who works on getting us off this planet, and in the case of astronauts and cosmonauts risk their very lives in this “greatest project humanity has ever pursued”. I of course agree with Ambrosius, but would go a little further.

We need to enlist not only the “great world religions” but people in the streets of “spiritual, but no specific religion”. We need to enlist the agnostics and atheists whose sense of wonder make them a suitable “attentive public,” people who may see their sense of wonder as different from or even opposed to religious thinking even though at basis it really is not. As Elizabeth Drescher noted and confirmed in *Choosing our religion: The spiritual lives of America’s nones* (Drescher 2016, pp. 11ff), professed atheists, agnostics, and “secular humanists” claiming no organized religion (“Nones”) enjoy “spiritual lives” as rich and vibrant as those in organized religions.

Because, whether we like to admit it or not, we are all like Pascal, largely clueless, sometimes vexed, always at a loss not just to explain but even glimmeringly understand who and what and where we are in this vast cosmos. That is what we who see getting off this planet as the best and likely the only way to begin to get a better grasp on these questions need to do: engage in conversations that connect getting out into space with the cavernous need to know inside every one of us. And because that need is already in all of us, the orientation missing for launching our species more fully and consistently and far further off this planet is not something that was never there before, but rather something that was already there, all the time, in every human being who ever lived. As religions

and science have both in their own ways recognized, the sense of wonder implicit in every revelation and discovery is an old friend who needs to be invited back to the table.

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