

# Don't Count on Billionaires to Get Humanity into Space

Far from pioneering wide access to orbit, privately funded spaceflight is geared to perpetuate inequities in space and on Earth



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Credit: Nick Higgins



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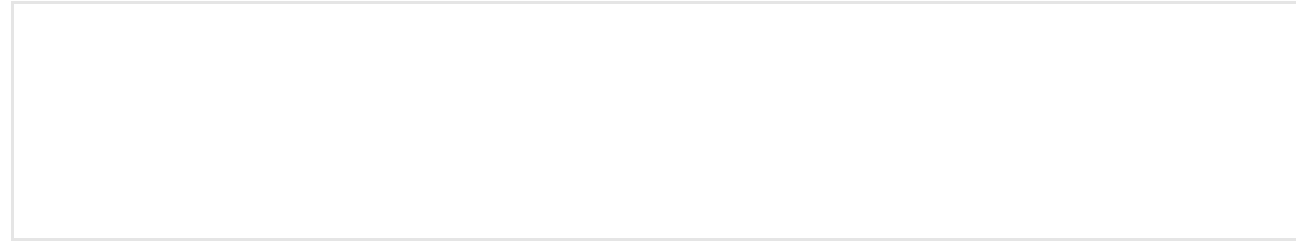
The SpaceX Falcon 9 rocket carrying the Inspiration4 crew launches from Pad 39A at NASA's Kennedy Space Center in Cape Canaveral, Florida on September 15, 2021. Credit: Chandan Khanna *Getty Images*

On September 18 the privately funded spaceflight *Inspiration4* splashed down safely in the Atlantic after a successful three days orbiting Earth. Amid breathless press coverage of the event, journalists struggled to find the right words—and not just because the spectacle of spaceflight often defies description. Rather, no one seemed sure of what to call the *Inspiration4* crew. Onboard *Inspiration4* were four people, none of whom are a professional astronaut in the traditional sense. Whether they're called “amateur astronauts,” “civilian crew,” “space tourists” or just plain old “astronauts,” though, it seemed like everyone agreed on the takeaway message of *Inspiration4*: the fact that these four individuals had left Earth on a privately funded flight meant that a new era had begun, one in which “anyone” could go to space. But is that really what the flight of *Inspiration4* means?

The recent rash of billionaire-funded launches has raised the idea that spaceflights that are funded and crewed privately are making space more “accessible.” In the case of *Inspiration4* and other recent private spaceflights, it is true that they are providing access to space in the most literal sense of “access”: they have ferried people who are not part of any

state astronaut corps to space. But for most people, the word “accessible” doesn’t just mean being able to go somewhere; something being “accessible” suggests that it has become attainable to people for whom it might not have been otherwise, specifically by *breaking barriers* to their participation.

Looking at the billionaire-funded civilian flights thus far—not just *Inspiration4* but also the recent flights of Jeff Bezos and Richard Branson—one notes that the crews have been drawn largely from a demographic that faces few barriers: wealthy, able-bodied, cisgender white men. Take Jared Isaacman, the billionaire who funded *Inspiration4*. Profiles of Isaacman tell a familiar story: as a restless and brilliant high school dropout, Isaacman founded a company from meager beginnings in his family's basement, eventually amassing his billions based on sheer ingenuity and hard work. A version of this humble backstory appears in the mythos of nearly every billionaire—for example, many emphasize that Bezos started Amazon in a garage. In reality, Bezos's parents funded Amazon's beginning to the tune of nearly \$250,000. And in Isaacman’s case, his family’s basement was located in Far Hills, N.J, the U.S.'s 11th wealthiest zip code. Not only are the basements and garages of the wealthy not the same as the rest of ours, in much of the country, you have to be doing pretty well to have a basement or garage in the first place.



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The civilian astronauts who aren't billionaires tend to be people who are eminently qualified to go to space already. For example, Sian Proctor, the accomplished geoscientist and educator who piloted the *Inspiration4* mission, was previously a finalist for NASA's astronaut corps. Wally Funk, who finally reached space at the age of 82 alongside Bezos, had excelled at the battery of tests administered to astronaut candidates during the Mercury program in the 1960s. At the time, however, astronauts were also required to have been military test pilots, which effectively barred women from the job. Even Chris Sembroski, who received his seat on *Inspiration4* as a gift from an unnamed friend who had originally won it in *Inspiration4*'s charity raffle for St. Jude Children's Research Hospital, would have an advantage in becoming an astronaut through the traditional route: he served in the U.S. Air Force and graduated with a degree in professional aeronautics from Embry-Riddle University after leaving active-duty military service. Of the

*Inspiration4* crew, only Hayley Arceneaux, the 29-year old physicians' assistant and cancer survivor who flew as the mission's medical officer, would not have qualified under NASA's current requirements because of her prosthesis.

Though astronaut selection has traditionally reflected the biases in broader U.S. culture, the NASA application process is at least open to anyone, whereas that of *Inspiration4* was an opaque mixture of money, luck, competition and Isaacman's whim. In a weird bit of theater, Isaacman conceived of *Inspiration4* as having four ideological pillars: Leadership (for which he chose himself), Generosity (which went to Sembroski for having entered the charity raffle), Hope (represented by Arceneaux) and Prosperity (represented by Proctor). Proctor, arguably the most accomplished person onboard *Inspiration4*, won the Prosperity seat through a convoluted entrepreneurship competition that required contestants to create online stores on Isaacman's Shift4Shop e-commerce platform. Contestants for "Prosperity" competed for likes and retweets on social media networks, where human and algorithmic biases alike tend to disadvantage people along racialized and gendered lines. Arceneaux was chosen to fly because she works at St. Jude, where she had previously received treatment for her cancer, and Isaacman had decided that one seat should go to a member of

the St. Jude staff.

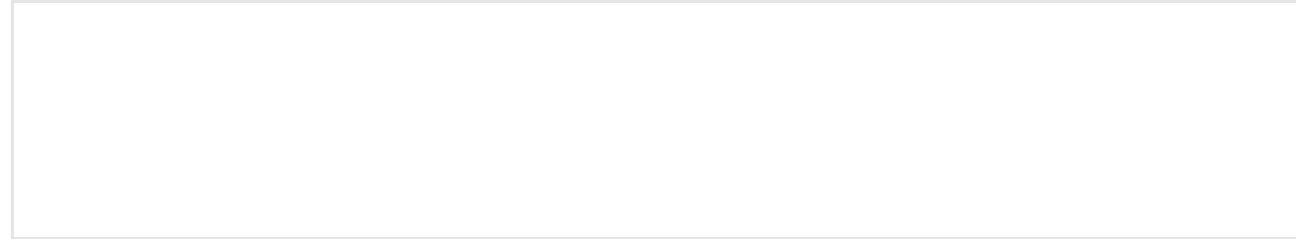
Certainly, some crew members are setting new records on an individual level. Proctor made history as the fourth Black woman in space and the first Black woman to pilot a spaceflight. Arceneaux became both the youngest person and the first person with a prosthesis to go to space. And Funk became the oldest person to ever travel to space. Individually, I am particularly thrilled that Proctor and Funk have achieved their lifelong dreams of going to space, which they have worked many hard years to achieve. Despite my critiques, the launch was definitely affecting on an emotional level: my husband and I watched it together, and though I have seen a number of launches in my life, including those carrying precious cargo I'd worked on, seeing a launch carrying someone I know—Dr. Proctor—into orbit was an entirely different cocktail of joy and trepidation.

The narrative that billionaire-funded spaceflight is making space more accessible is not true beyond these specific, individual cases, however. If one argues that state-run astronaut selection processes are gatekeeping access to space, then billionaires selecting crews (including themselves) only substitutes an even less transparent arbiter of access in place of a national space agency. A gatekeeper lifting the velvet rope for outstanding individuals

might create amazing experiences for those people but doesn't remove the barrier itself. In a larger sense, today's billionaires not only inherited but continue to actively create a world rife with inequity—including barriers of racism, sexism and ableism that have long barred people like Funk, Proctor and Arceneaux from the astronaut corps. A world with billionaires in it—or orbiting it—is not an equitable one by definition.

Of course, I'd be remiss not to mention that a central element of *Inspiration4* was a fundraising drive for St. Jude Children's Research Hospital, which received a \$50-million donation from Elon Musk toward its \$200 million goal. Without a doubt, money going to a hospital that does incredible healing work is a good thing. But in the context of the immense wealth at play, it's hard to forget that St. Jude could have received its entire fundraising goal without anyone ever leaving the planet. Besides his enthusiasm for space, Isaacman has something else in common with Bezos and Musk: he is one of the few people to become even more fabulously wealthy over the course of the pandemic. While Isaacman hasn't disclosed what he paid Musk's SpaceX for his trip into orbit, \$200 million or more is a reasonable estimate. And though Musk's \$50-million donation sounds enormously generous for most of us, recall that his net worth is currently around \$194 billion. So if you scale his donation to the median American's

net worth (around \$97,680 on average, not accounting for the racial wealth gap or age differences), Musk gave the equivalent of about \$25.



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For space to become more accessible in a meaningful sense, we must embrace a broader definition of who can become an astronaut—without requiring that access to space be mediated by people with extreme privilege. There are glimmers of hope: in the past year, the European Space Agency took a step in that direction by issuing an open call for people with disabilities to participate in the Parastronaut Feasibility Project, an effort to study the potential inclusion of people with physical disabilities in astronaut selection. ESA's move is an incremental one, but it sets an important precedent for creating a more capacious future vision of who can go to space—one that certainly pushes the bar for what people can demand of public space agencies such as NASA, which, unlike private companies, answer to the public. But ultimately, making progress toward an astronaut corps that



looks more like humanity as a whole isn't just about picking outstanding individuals and making sure those individuals can have an amazing experience. As my fellow astronomer [Chanda Prescod-Weinstein](#) has argued, the barriers to people's full participation in space (from Earth or above it) are fundamentally a resource distribution problem. As she writes, "philanthropy isn't the solution to inequality, and we don't actually face a choice between basic human needs and exciting journeys into the universe."

As for making space accessible to the rest of us, a typical argument goes that we should be patient with billionaires going to space, as the off-Earth adventures of the wealthy will eventually make it affordable for the rest of the world—sort of like trickle-down economics, except the trickling is coming from beyond the von Kármán line. That may be historically true of some things— for example, commercial airline flights. But most of the otherworldly, exceptionally dangerous adventures of the very rich—e.g., summiting Mount Everest, expeditions to Antarctica, or flying fighter jets for fun (Isaacman's personal hobby)—remain out of reach for most of the world. While we are waiting, though, I'm sure the extremely wealthy will continue to take expensive joyrides, occasionally offering seats to others and perhaps hoping that their antics will distract us enough to forget that the gluttonous accumulation of wealth wouldn't be possible under any kind of just system.

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