

# To infinity and beyond?

Understanding public attitudes towards the 21st century space race, and what it could mean for depictions of space in TV & film

The Apollo Moon missions were, undoubtedly, one of humanity's greatest accomplishments of the 20th century—and succeeded in uniting the American public in a way unmatched by any other scientific, technological, or political achievement. To this day, the first Moon landing—watched live by over 125 million people—remains the most viewed television broadcast in US history.<sup>1</sup>

But to many Americans, the achievements of the space race now feel like a distant cultural memory. It's been over 50 years since an astronaut last walked on the Moon, and all but 8 of the original Apollo astronauts have since passed away.<sup>2</sup> And while there have certainly been incredible feats of space exploration carried out in the intervening half-century, none of them have succeeded in capturing the public's imagination in quite the same way.

1. "From The Moon to Your Living Room: The Apollo 11 Broadcast," Science+Media Museum, July 8th, 2019  
2. Ben Fell, "The last of the Moon men: the stories of the surviving Apollo astronauts," BBC News, January 10th, 2024

2024, however, could be the year that finally starts to change. This year is set to see the launch of an exceptionally high number of major space missions, both within the US and overseas. Moreover, NASA has made it clear that they now believe the US is in a "new space race" against China;<sup>3</sup> the agency has announced an ambitious set of plans to return humans to the Moon as early as 2026, with a view to launch the first manned missions to Mars before the end of the 2030s.<sup>4</sup>

3. Jonathan Josephs, "US-China rivalry spurs investment in space tech," BBC News, September 26th, 2023

4. Will Sullivan, "NASA Delays Artemis 2, Artemis 3 Moon Missions for Safety Reasons," Smithsonian Magazine, January 10th, 2024

## KEY QUESTIONS

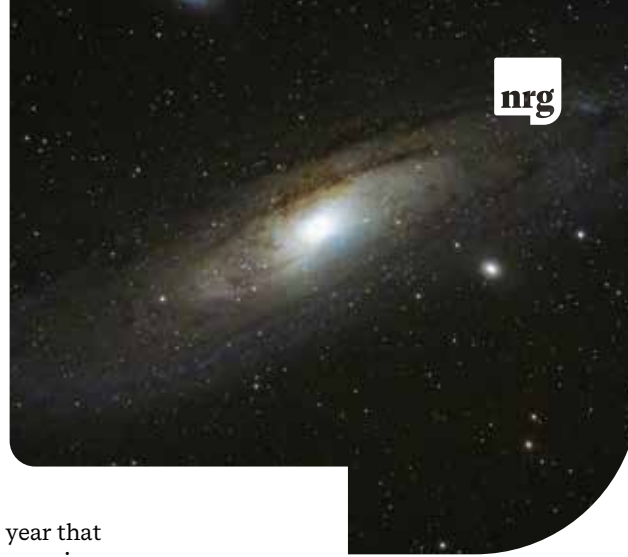
- ✦ Will the new space race succeed in capturing the public's imagination?
- ✦ How will this new era of space exploration differ from the space race of the 50s and 60s?
- ✦ What sort of mark will the coming space race leave on popular culture?

And they certainly aren't the only people forecasting a 21st century space race. 2024 will mark a major escalation in both private and public sector space exploration across Japan, China, and India.<sup>5</sup> Meanwhile, Elon Musk continues to talk up his grand ambitions of setting up permanent human colonies among the stars.<sup>6</sup>

All signs indicate that we are on the cusp of a new chapter in the history of space exploration. So, in this paper, we'll unpack US public attitudes towards this looming space race—and the kind of impact it could have on American culture writ large. Many of the most influential pieces of art and pop culture of the mid-twentieth century drew direct inspiration from the cold war era space race—so, if history is any guide, we could well be about to see a new generation of movies and TV shows that explore humanity's relationship with the cosmos and our place in the universe.

5. Mitsuru Obe, "Space race to heat up in 2024 as Japan, China, India reach for the stars," Nikkei Asia, January 3rd, 2024

6. Vishwam Sankaran, "Elon Musk reveals how he plans to colonise Mars in next few years in new short animated clip," The Independent, April 12th, 2023



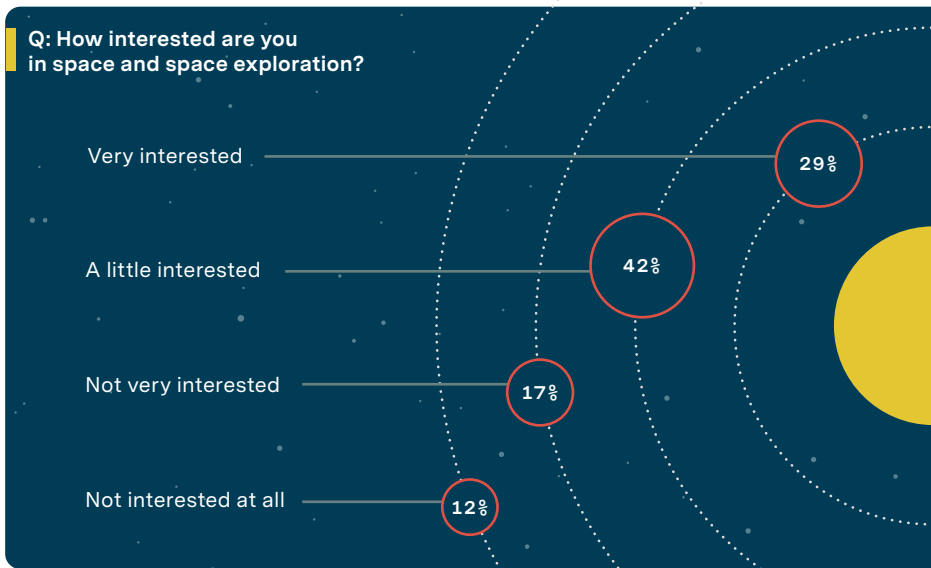
# Americans are generally receptive to learning more about space—and are particularly excited by the possibility of manned missions

Right now, most Americans aren't actively going out of their way to seek out content about the cosmos. Around 3 in 10—29%—describe themselves as “very interested” in space exploration. These are the people who are most likely to be actively paying attention to stories about space in the news, and most likely to watch documentaries or online videos on the topic, or seek out podcasts, articles, or other forms of space-related content.

There is, however, a much larger contingent of consumers who have at least a passing interest in the topic—and are willing to pay attention when a story comes along that's exciting enough to make them sit up and notice. In total,

**71% of Americans are at least a little interested in space exploration.**

To truly capture the public's imagination, NASA and other space agencies will need to find ways of reaching out to these “soft space fans,” finding narratives that can inspire a sense of optimism and urgency among these consumers.



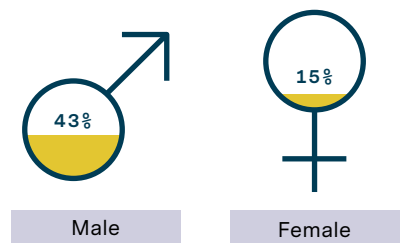
One way of doing so would be to **make space exploration more diverse and inclusive**. Right now, there's a dramatic gender gap when it comes to interest in space: American men are over twice as likely as women to have a strong interest in space.

That's understandable, given the way in which women were traditionally excluded from US space exploration. There were no female astronauts who took part in the original Apollo missions; and when preparing for her first trip into orbit, NASA engineers infamously offered to send Sally Ride into space with 100 tampons for a one-week journey.<sup>7</sup>

Fortunately, NASA appears to have recognized its need to make up for these historical shortcomings. The agency has already announced that the Artemis II mission—in which astronauts will orbit the Moon for the first time since the 1970s—will feature both the first woman and the first Black astronaut assigned to a lunar mission.<sup>8</sup> In this respect, we can already see one of the key ways that the new space race is likely to differ from its historical antecedent.

7. Amanda Taub, "NASA thought Sally Ride needed 100 tampons for 1 week "just to be safe." From what?", Vox, May 26th, 2015  
 8. Jonathan Amos, "Nasa names first woman and black man on Moon mission," BBC News, April 3rd, 2023

**Interest in space by gender**  
 Percentage of consumers who describe themselves as “very interested” in space



And as the real-world space race becomes more inclusive, it's important that fictional portrayals keep pace, helping to usher in a new, more diverse generation of space enthusiasts. *For All Mankind* is one good example of what this can look like in practice: in the show's alternative history of the United States, female astronauts and astronauts of color play a much more prominent role than they did in our reality. 2016's *Hidden Figures*, on the other hand, spotlights the historical contributions of African-American women to the early years of the space program—demonstrating, in the process, how an interest in

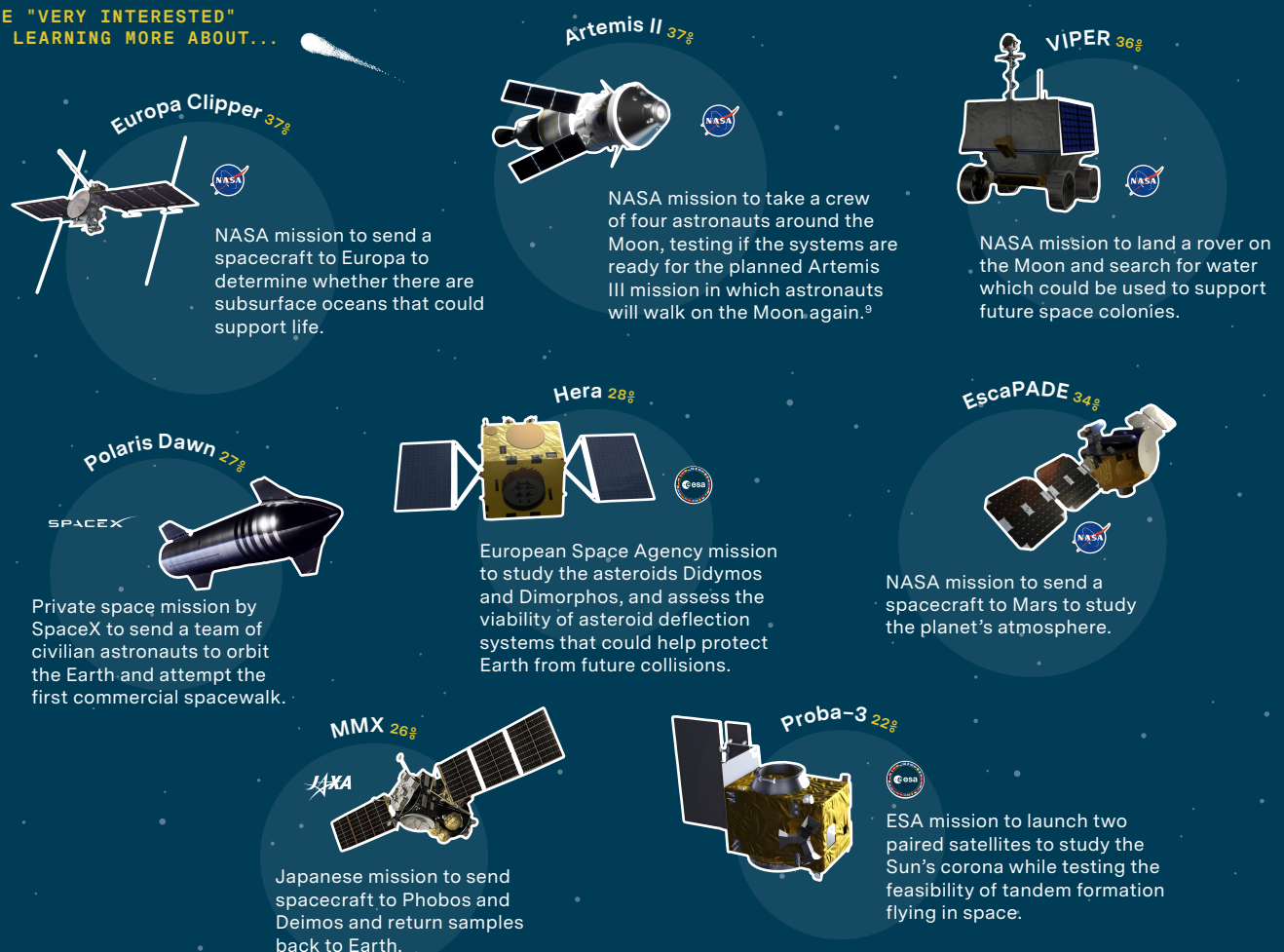
bringing more attention to historically marginalized voices can broaden the demographic appeal of space-related content while also creating new opportunities for compelling narratives.

The other way that NASA and news agencies can spark interest beyond the core audience of dedicated space fans is through **a renewed focus on the human side of space exploration**. While unmanned craft play a vitally important role in helping to further our scientific understanding of the universe, they simply don't ignite the passions of consumers in the way that manned missions can.

We can see this most clearly by looking at the specific upcoming space missions that consumers express the greatest level of interest in. In general, consumers appear to be most receptive to learning about missions that could lay the groundwork for manned missions or even permanent human space colonies—such as the Europa Clipper and VIPER missions to search for water on Europa and the Moon, respectively, or the EscaPADE mission that will allow us to better understand the atmosphere of Mars and the technical challenges facing future human exploration of the Red Planet.

**Q: HOW INTERESTED ARE YOU IN LEARNING MORE ABOUT SPACE MISSIONS PLANNED FOR 2024?**

ARE "VERY INTERESTED" IN LEARNING MORE ABOUT...



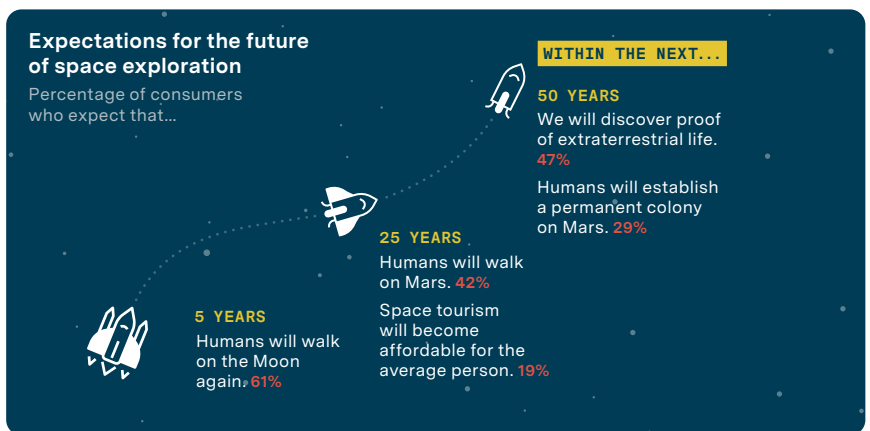
9. Mission delayed until 2025

Most notably, Artemis II is, jointly with the Europa Clipper, the upcoming mission that inspires the highest level of consumer interest. While the launch date for this mission has recently slipped into 2025, it still represents the most ambitious manned mission in many decades—and will certainly be a key turning point in reigniting Americans' interest in the worlds beyond our planet.

Looking ahead even further, Artemis III—the mission that will finally see humans once again step foot on the Moon—is likely to represent an even more important milestone of the new space race, even if it may struggle to command as many eyeballs as the Apollo missions given today's more fragmented media ecosystem.

And it's worth noting that **most Americans have high expectations for the Artemis missions**: over 6 in 10 consumers expect that NASA will be successful in achieving its ambitions of returning humans to the Moon this decade.

## This new era of space exploration may finally give younger Americans a reason to care about the cosmos



On the other hand, they tend to be more skeptical about the ability of NASA and private companies like SpaceX to achieve their stated goals of sending humans to Mars and establishing a permanent colony there. It's possible though that, if the Artemis missions go smoothly, that could inspire a greater degree of confidence in some of these longer-term ambitions.

Notably, Americans think it's substantially *more* likely that we'll discover proof of extraterrestrial life within the next 50 years than successfully establish a Mars colony. This reinforces other recent studies that have found that Americans are broadly receptive to the possibility of life existing beyond our world: one Pew Research Center study in 2021, for example, found that 65% of US adults believe that intelligent life probably exists on other planets.<sup>10</sup>

10. Courtney Kennedy and Arnold Lau, "Most Americans believe in intelligent life beyond Earth; few see UFOs as a major national security threat," Pew Research Center, June 30th, 2021

Perhaps the most significant cultural impact of the upcoming Artemis missions, however, will be the role they could play in inspiring younger Americans, specifically, to take an interest in space exploration.

Currently, Gen Z and Millennials are somewhat less likely to express a strong level of interest in space than older generations—likely a reflection of the fact that these generations were largely born after the end of the Cold War and grew up far removed from the 20th century's historic achievements of space exploration.

However, these generations are also the most likely to say that their interest in space exploration has increased within the past 12 months. **Forty percent of Gen Z, for example, say that they have become more interested in space recently**—compared to just 21% of Gen X and only 11% of Boomers. This suggests that recent missions are having a disproportionate impact on attitudes among these younger demographic groups. If this trend continues, Gen Z and Millennials may finally find that they have as much reason to care about space as their parents and grandparents once did.

**Interest in space by generation**

Percentage of consumers who describe themselves as “very interested” in space



It’s important to note, however, that **the reasons motivating younger people to take an interest in space are not the same as the factors that drove interest among older generations.** Compared to the population as a whole, Gen Z are more likely to say that their interest in space exploration is rooted, at least in part, in a desire to see humans eventually create permanent colonies on other planets. Also, Gen Z and Millennials are significantly less likely than older generations to cite national pride as a factor that makes them pay attention to space missions.

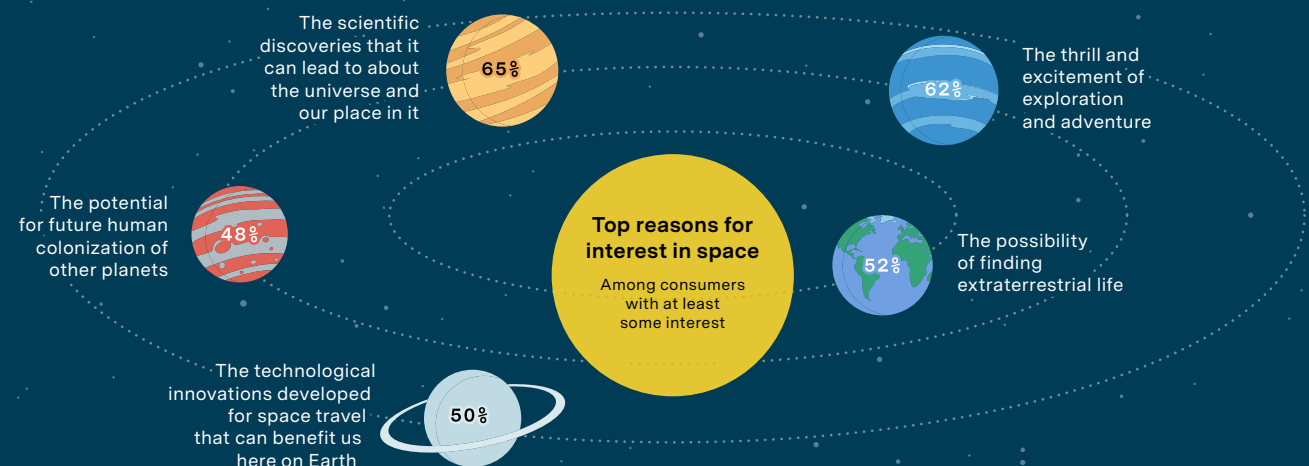
This speaks to another major difference between the nature of today’s space race and the space race of the 50s and 60s. For today’s young people, modern space exploration is not about national ambitions or geopolitics. Rather, it is **deeply connected to broader cultural concerns about sustainability and the long-term future of the human race.**

As younger Americans become more and more pessimistic about the fate of our planet,<sup>11</sup> space exploration provides a rare opportunity for optimism—both in the sense that a better understanding of our planet and its atmosphere could help us to mitigate the worst effects of climate change,<sup>12</sup> and in the sense that other planets could one day provide a refuge for humanity if the Earth is no longer able to support our species.

This is reflected in the fact that almost half—48%—of Gen Z believe that establishing a permanent space colony is essential for the long-term survival of humanity, compared to just 38% of all consumers and only 26% of Boomers.

**For many younger Americans, the modern space race isn’t a race against China, India, or any other geopolitical rival: it’s a race against time, a desperate last-gasp attempt to address the enormous ecological challenges facing our species.**

11. “Millennials and Gen-Z have higher rates of climate worry,” Cardiff University, July 5th, 2023  
 12. “How space science can help us combat climate change,” UK Research and Innovation, November 10th, 2022



## The role of private corporations in this new space race may be limiting consumers' ability to become emotionally invested

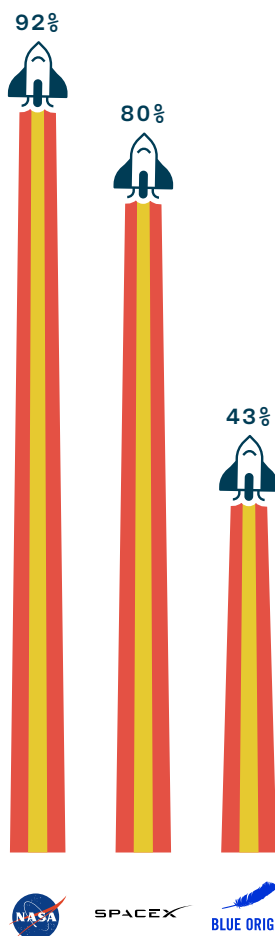
But there's another, perhaps more obvious, difference between the modern space race and previous eras of space exploration. Today, private companies like SpaceX and Blue Origin play a major role in facilitating humanity's exploration of the stars—both launching their own missions and acting as contractors for NASA and other public space agencies.

And increasingly, it's billionaires like Jeff Bezos and Elon Musk—rather than astronauts like Neil Armstrong and Sally Ride—who are the public faces of space exploration. Musk has been particularly effective at inserting himself into the public discourse about space; his SpaceX brand enjoys 80% name recognition among the US public, just 12 points behind NASA itself.

Alongside the rise of private spaceflight companies has come an increased focus on the long-term growth of commercial—as opposed to scientific—space travel. 2023, for example, saw both SpaceX<sup>13</sup> and Richard Branson's Virgin Galactic<sup>14</sup> successfully take paying tourists into space, and some analysts predict that the market for space tourism could be worth more than \$8 billion by the end of the decade.<sup>15</sup>

### Consumers' awareness of key space exploration groups

Percentage of consumers who say they've heard of...



**There's reason to believe, however, that the increased commercialization of space travel may be suppressing public interest in the topic.** Many Americans are still somewhat skeptical of private spaceflight companies—despite the fact that many of them have been operating for more than two decades at this point. Notably, the percentage of consumers with a “very positive” view of NASA is more than twice as large as the percentage who feel the same way towards SpaceX, and more than four times the number who feel that way towards Blue Origin.

Moreover, space tourism has largely failed to generate the same sort of excitement and passion among the general public as other forms of space travel.

### Only 24% of consumers

**with an interest in space say that the possibility of eventually going to space themselves plays a role in motivating their interest;**

and fewer than 1 in 5 Americans think that there's any possibility that space tourism will become affordable for regular people within the next 25 years.

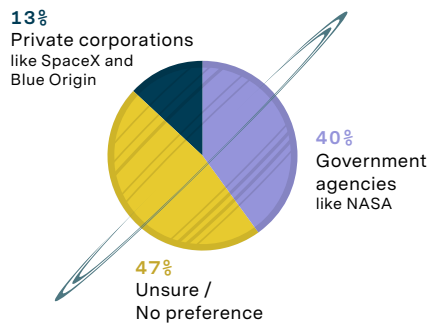
14. Maya Yang, “Virgin Galactic successfully flies tourists to space for first time,” The Guardian, August 10th, 2023

15. “Global Space Tourism Market to Reach \$8.67 Billion by 2030,” ResearchandMarkets.com, August 31st, 2022

13. William Harwood, “SpaceX launches 4 private citizens, including 2 Saudis, on commercial flights to space station,” CBS News, May 21st, 2023

This doesn't mean that the American public is ideologically opposed to private companies having a role to play in space exploration. After all, most people who've heard of SpaceX and Blue Origin have a reasonably positive opinion of them. It is clear, however, that there's a great deal of public hesitation about these companies being in the driving seat of the space race. Forty percent of Americans believe that government agencies like NASA should be the ones leading and directing our exploration of space—whereas just 13% would prefer to live in a world in which private corporations were the primary actors.

**Q: Who do you think should play the most important role in leading and directing our exploration of space?**



Ultimately, this raises some profound questions about the idea of space as a public good and who benefits from it. If private companies play too large a role in shaping public consciousness about space—and if billionaires like Musk cement their position as the “faces of space” in the public imagination—then there's a real danger that this new space race will fail to unify the American public in the same way that the Apollo missions once did.

**Or worse, ordinary Americans could quickly start to become resentful or distrustful of space exploration if they perceive it as being for the benefit of billionaires and space tourists, rather than an expression of a collective global ambition to push ourselves to new heights and secure a future for ourselves as an interplanetary civilization.**



Consumers' opinions towards key space exploration groups	Among consumers who have heard of these organizations		
	NASA	SPACEX	BLUE ORIGIN
Very positive	48%	23%	11%
Mostly positive	46%	48%	56%
Mostly negative	5%	19%	24%
Very negative	2%	10%	9%

# Sci-fi content will be a key outlet for consumers' newfound interest in space—particularly for younger generations

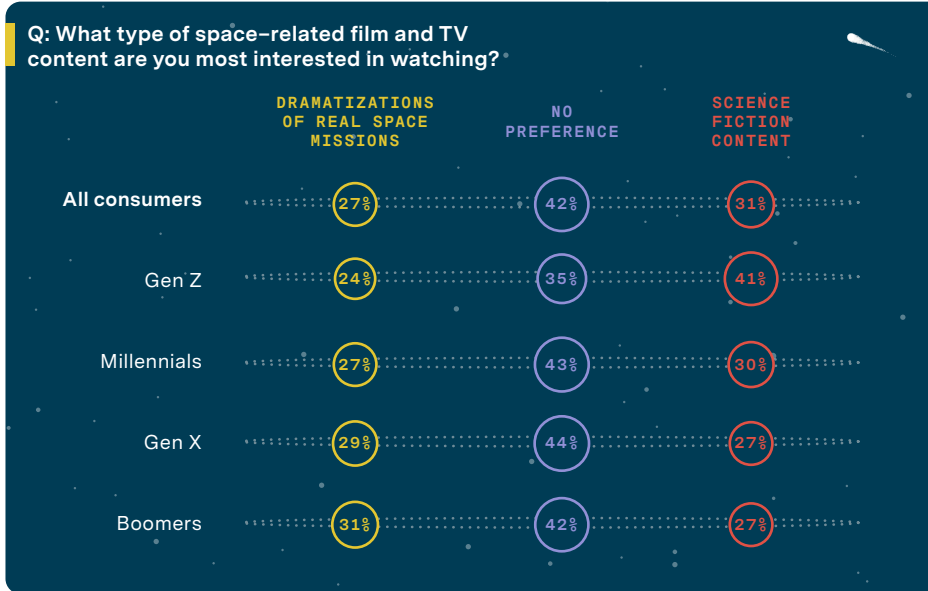
In many ways, the late 1960s represented a golden era for films and TV shows set in space. From critically acclaimed masterpieces like *2001: A Space Odyssey*, to schlockier offerings like *Barbarella* and *Planet of the Apes*, the space race left an indelible mark on popular culture, as screenwriters and Hollywood producers sought to respond to the upswell of public interest in the outer reaches of our solar system. Of all the franchises that debuted in this era, perhaps none exemplify the mood of the time better than *Star Trek*—a franchise that remains a cultural juggernaut to this day.

## 66% of consumers

believe that sci-fi content is an important tool for inspiring people to care about space.

There are already some early indicators that this new era of space exploration may, likewise, lead to a surge in audiences' appetite for space-related film and TV content—and for science fiction content in particular. Predictably, consumers with an interest in space are more likely to show a willingness to engage with sci-fi content: 90% of Americans who care about space exploration say that they enjoy sci-fi content, compared with just 41% of other consumers. And two thirds of Americans agree that sci-fi has an important role to play in helping to inspire public interest in space.

Younger viewers, in particular, are likely to express their interest in space and space exploration through the consumption of science fiction content. On the other hand, Gen X and Boomers are less likely to demonstrate an interest in sci-fi than in fictionalized portrayals of real space missions—films such as *Apollo 13*, *The Right Stuff*, or *First Man*.



So there's a strong chance that media coverage of upcoming space missions will help to drive viewership for the many space-related films and TV shows slated for release this year, especially among Gen Z and Millennial audiences. Now that superhero movies have started to relinquish their long hold over the box office, the sci-fi blockbuster may just be poised to make a comeback in a major way—building on the recent critical and financial success of releases such as 2021's *Dune* and 2022's *Avatar: The Way of Water*.

The space-related films and shows currently generating the strongest interest among viewers tend to be new entries in well-established franchises; audiences are showing strong initial interest in this year's upcoming releases in the *Dune*, *Alien*, and *Blade Runner* universes. But beyond these established franchises, there are plenty of other space-related releases on the horizon for 2024—including the Apple TV+ series *Constellation* and *Murderbot*, Netflix's upcoming adaptation of Liu Cixin's *The Three-Body Problem*, as well as Bong Joon-Ho's return to the sci-fi genre in *Mickey 17*.

### 2024's most-anticipated space-themed releases

Ranked by percentage of consumers who are "very interested" in watching each piece of content<sup>16</sup>



Dune: Part 2



Alien: Romulus



Blade Runner 2099



Dune: Prophecy



Constellation

<sup>16</sup> Consumers were presented with the title and a one-sentence summary of upcoming films and TV shows about space and asked to assess their likelihood to watch



## THE NRG PERSPECTIVE

# How media brands can maximize the effectiveness of space-related entertainment content

If this new era of space exploration does indeed bring with it a resurgence in audience appetite for interstellar content, studios and distributors will inevitably find themselves asking how they can make their offerings stand apart from the competition in an increasingly crowded genre.

Here are three recommendations for maximizing the impact of your space-related content—be it sci-fi or otherwise—and ensuring it feels timely and relevant as we embark upon this new chapter in the history of space exploration:

**National Research Group** is a leading global insights and strategy firm at the intersection of content, culture, and technology. The world's most powerful marketers turn to us for insights into growth and strategy for any content, anywhere, on any device.

#### METHODOLOGY

Unless otherwise noted, data in this report comes from a study of 1,000 US consumers ages 18 to 64, conducted online in January 2024. Participants for this study were selected to be nationally representative of the US population on the basis of gender, income, race, and region.

**Words and analysis:** Fergus Navaratnam-Blair, Jasmina Saleh, Grady Miller, Lucy Murrey, Joshua Hack

**Design:** Olivia Reaney-Hall, Grace Stees

## 01 Embrace the relationship between space and sustainability

For younger audiences, an interest in space is often part and parcel of a larger preoccupation with the long-term future of our planet and our species. Gen Z and Millennial viewers, in particular, are likely to see a strong relationship between how we explore the stars and how we treat the environment here on Earth.

This can create some compelling storytelling opportunities—and, indeed, there are already a number of recent examples of successful films and TV shows that put this thematic relationship front and center. *Don't Look Up*, for example, used an asteroid impact as a metaphor for our failure to respond to the challenges of climate change; James Cameron's *Avatar* films, meanwhile, use their extraterrestrial settings to explore humanity's exploitation of the natural world. These kinds of themes can help make content feel relevant to an audience whose attitudes towards space are bound up inextricably with their fears about the state of our own planet.

## 02 Tap into concerns about the commercialization of space

The commercialization of space, for better or for worse, has clearly become one of the defining narratives of the modern space race, and has played a major role in shaping public opinion towards the concept of space exploration in general.

Fictional content about space, therefore, ought to show a willingness to grapple with this trend—either through offering an alternative vision of what space exploration could look like, or by highlighting the ethical issues surrounding the exploitation of space by commercial interests. The *Blade Runner* and *Alien* universes, for example, both prominently feature unscrupulous megacorporations who are willing to put ethics to one side in the pursuit of the commercial exploitation of other worlds. By leaning into this aspect of their mythology, franchises like these can ensure that they have something timely to say about the concerns and anxieties of today's consumers when it comes to our relationship with worlds beyond our own.

## 03 Leave room for optimism

It's also important, however, that these more cynical franchises are counterbalanced by stories that adopt a more positive and uplifting tone. There will—we can all hope—be many moments of triumph and inspiration over the coming years, as humanity returns to the Moon and sets its sights on Mars. So, naturally, viewers are going to want to see that sense of optimism reflected back to them in pop culture.

The recent success of *Star Trek: Strange New Worlds* demonstrates that you don't have to sacrifice conflict or stakes to showcase a more optimistic vision of the future. Showrunner Henry Alonso Myers has referred to it as a deliberately "hopeful" series—framing it as, in many ways, a throwback to Gene Roddenberry's original dream of a future where humanity could put aside petty differences of race and nationality to explore the final frontier of space.<sup>17</sup>

And it's this sort of hopeful and optimistic storytelling, ultimately, that will pave the way for future breakthroughs in the real-world. There were multiple generations of scientists and astronauts whose interest in space was ignited by watching early *Star Trek*—so it's vital that we find room for similar stories today that can spark the imagination and ambition of tomorrow's pioneers.

17. Anthony Pascale, "Interview: Henry Alonso Myers on 'Star Trek: Strange New Worlds' Premiere, Pon Farr, and Going Big", [TrekMovie.com](https://trekmovie.com), May 5th, 2022