



National Opinion Poll on Mars, Robotics and Exploration

-Conducted by Phillips & Company, an independent communications consulting firm

Phillips
& Company

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Methodology

To identify the target survey population, Phillips distributed the survey and collected the results using Qualtrics, a third-party survey platform and data analytics provider. The RiverSelect sampling method was used which enables researchers to target hundreds of thousands of fresh survey respondents sourced from the Web on any given day. Qualtrics currently utilizes a global panel of over 6.7 million active panelists. Phillips designed an opinion poll using effective controls to minimize bias and ensure accuracy, ensuring that questions were simple and direct. It was ensured that the order of questions and language used were not leading. Questions were randomized to further eliminate bias. Several tests were conducted to ensure that order is not a factor on outcomes. The survey also collected demographic data asking participants to indicate their gender, race, age, income-level, education-level and ZIP code in which they live.

The survey was designed to elicit at least 1,067 responses to ensure a representative sample of the U.S. population that is statistically accurate results at a 95% confidence level and an error rate of $\pm 3\%$.

The survey was completed between April 27, 2016 and April 29, 2016 and the data was standardized by removing incomplete and spurious answers, as well as standard terms across keywords.

Total completed respondents: 1,118

Standardized dataset: 1,075

Demographics

Of the 1,075 respondents, 50% were male and 50% were female, with a nearly even distribution of respondents across the age groups (16% - 19%) except for the 18-24 age group that had 13% of respondents.

#	Answer	Response	%
1	18 to 24	135	13%
2	25 to 34	208	19%
3	35 to 44	167	16%
4	45 to 54	188	18%
5	55 to 64	191	18%
6	65 or older	184	17%
	Total	1,073	100%

3% of survey respondents had no high school degree, while 9% had advanced degrees. Those with a high school diploma numbered 24%, and those with less than four years of college or trade school were at 35%. 29% of respondents had a four year college degree.

#	Answer	Response	%
1	No high school degree	32	3%
2	High School / GED	254	24%
3	Less than 4 years of college or trade school	374	35%
4	College degree (Bachelor's)	316	29%
5	Advanced college degree (Doctorate or Master's)	97	9%
	Total	1,073	100%

While the overwhelming majority (76%) of respondents were White/Anglo Saxon, the second highest category was Black/African-American (10%), followed by 6% Hispanic/Latino, 4% Asian/Pacific Islander, with 3% identifying as either "other" or "prefer not to answer".

#	Answer	Response	%
1	White/Anglo-Saxon	820	76%
2	Hispanic/Latino	60	6%
3	Black/African-American	110	10%
4	Asian/Pacific Islander	47	4%
5	Other	23	2%
6	Prefer not to answer	13	1%
	Total	1,073	100%

Socioeconomically, 33% of the respondents were classified in the \$50,000 - \$99,999 range, with 30% in the \$25,000 to \$49,999 range and 24% reporting in the less than \$24,999 range. Only 14% of respondents listed household income as above \$100,000.

NATIONAL ATTITUDES ABOUT HUMAN SPACE EXPLORATION

Educational Level

84% of Americans agree or strongly agree that America leads the world in space exploration. Education level was not a factor in this perception. When asked if the United States should send humans to Mars, a majority of 64% of Americans agree or strongly agree in the mission.

All education-levels believe that space exploration should be a priority with more than 60% support for the larger goal. While those without a high school education were less likely to support a broader space mission, the majority of those in that category still supported the goal.

Support for robotics missions versus human missions was influenced by educational attainment. Support was nearly split with those who held a high school diploma or less. Overall, Americans disagree or strongly disagree that robots can do the work of humans – the more educated you are, the more you support human exploration.

All educational-levels were inspired by the concept of exploration as critical to prosperity and human progress. Counter to other issues, those with the least amount of education were most inspired and in agreement with the statement.

Education does play a factor in support for the Journey to Mars. Of those without a high school education, 55% did not support the U.S. investment in human Mars exploration. This was the only group that did not support the Journey.

Gender

The gender of the respondents played an interesting role in their responses. In belief that America leads the world in space exploration, both males and females were overwhelming in agreement (86.3% and 81.8% respectively). Yet, support for sending humans to Mars shows stronger agreement by males than females (70% versus 58.2%) and 65.6% of males and 56.2% of females believe that space exploration should be a national priority.

Support for robotic missions was higher than for human missions for both groups with 65% of men disagreeing or strongly disagreeing that robots can do the work of humans vs. 56% of women.

The message of exploration for prosperity and human progress resonated strongly with both men and women, indicating that this messaging is very strong (81.5% men, 77% women).

Age

Asked whether America leads in space exploration, across all demographics groups, there was an overwhelming demonstration of support (over 80% for each age group category), indicating that, as a country, citizens believe that America is still the leader. This finding shows improvement from a study done in 2013 indicating that many in the populous believed that America was losing its leadership position. Despite our dependence on Soyuz to transport astronauts, there is clear support and belief in the American space system. With strong support in younger age groups, it provides proof that all Americans, and not just the Apollo generation, believe that America is the space exploration leader.

In a similar vein, most age groups showed support for U.S. led human missions to Mars. The largest category of support are those in the 25-34 year old demographic, following by those 35-44 and then the 25-34 bracket. The total average percent of agree or strongly agree was 64.2%, again indicating that the respondents believe America can, will, and should lead in human deep space exploration.

Less than 44% of respondents across all age categories felt that space exploration should not be a priority, supporting and nearly mirroring sentiments described above. This further validates the overwhelming sentiment in support of continuing the path that the country is on, and making space exploration one of our country's defining attributes.

When considering the questions of robotics over humans in space exploration, the largest group in favor of robots was the 45-54 demographic, followed by the over 65 bracket. Although the differences in percentages were slight on this question, all categories disagreed or strongly disagreed (57%) that robots can do the work instead of humans.

Every age bracket agreed or strongly agreed with the sentiment that “exploration is critical to prosperity and progress” with the 25-34 age group rating highest (86.5%) followed by 35-44 (84.4%) and 18-24 (83.7%). This message resonated least with the 45-54 age bracket.

Ethnicity

Those who identified themselves as Asian/Pacific Islanders demonstrated the strongest agreement that America leads the world in space exploration (91.5%) followed by White/Anglo Saxon (85.6%), Black/African-American (78.2%) and finally Hispanic/Latino at 75%.

Human exploration of Mars showed slightly less enthusiasm across all groups, yet still with Asian/Pacific Islanders demonstrating strongest agreement (70.2%) followed by Hispanic/Latino (70.5), White/Anglo Saxon (65.2%), and Black/African-American at 53.7%.

63.3% of White/Anglo Saxon respondents felt that space exploration should be a priority, leading across the ethnic groups. Asian/Pacific Islanders trailed this group of support with 28.8%. Hispanic/Latino responders were supportive (61.7%) and Black/African-American respondents were evenly split on this topic.

When considering the question of robotics over humans in space exploration, the largest group in favor of robots was the Black/African-American bracket (46.3%). The White/Anglo Saxon demographic was most supportive of human missions with 63.3% favoring humans. Hispanics favored humans at 60%, and Asian/Pacific Islanders support humans over robotics at 61.7%.

The prosperity and progress message resonated mostly strongly with Asian/Pacific Islanders (85.1%), followed by 79.5% for White/Anglo Saxons, 77.4% for Black/African-Americans, and 76.7% Hispanic/Latino, indicating, once again, that this message resonates strongly with nearly every demographic segment of American society.

Income

All income levels reported agreeing with the statement that America leads the world in space exploration, with those reporting an income of \$100,000- \$149,999 showing greatest support at 91%. All groups reported agreement at over 75%.

Human exploration of Mars was supported most by those at an income level of \$100,000-\$149,999 (74%) followed by \$150,000 - \$249,999 (71.8%). The group showing the least support were those reporting an income of lower than \$24,999 (56.5%).

The group that least support space exploration as a priority was the lowest earners (53.7%). Those with the largest income showed support at the highest rate of 87.5%.

Those who believe we do not need to send humans to space because robotics can do the work was highest in the lower socioeconomic groups than in higher. The three lowest groups showed stronger robotic support (43.3%, 41.3% and 35.8%). The higher earners showed a belief that human exploration is necessary.

Again, as with all other demographic criteria, there is strong support for the statement "Exploration is critical to prosperity and progress." Each group supported this over 60%. The greatest income earners, however, showed the least support at 62.5%,

Educational Level

What is the highest level of education you have completed?

		No high school degree	High School / GED	Less than 4 years of college or trade school	College degree (Bachelor's)	Advanced college degree (Doctorate or Master's)	Total
America leads the world in space exploration.	Strongly disagree	3.1%	3.9%	1.9%	2.5%	3.1%	2.7%
	Disagree	21.9%	11.4%	16.0%	10.8%	13.4%	13.3%
	Agree	62.5%	59.8%	59.9%	57.0%	63.9%	59.5%
	Strongly agree	12.5%	24.8%	22.2%	29.8%	19.6%	24.5%
The United States should send humans to Mars.	Strongly disagree	12.5%	12.6%	8.8%	7.3%	6.2%	9.1%
	Disagree	43.8%	26.8%	25.9%	25.0%	28.9%	26.7%
	Agree	40.6%	42.9%	44.4%	44.0%	45.4%	43.9%
	Strongly agree	3.1%	17.7%	20.9%	23.7%	19.6%	20.3%
	Strongly disagree	12.5%	19.7%	22.2%	24.7%	26.8%	22.5%

		What is your gender?					
		Male	Female				
America leads the world in space exploration.	Strongly disagree	3.4%	2.1%	17.9%	19.9%	24.7%	19.8%
	Disagree	10.3%	16.1%	46.3%	42.4%	48.5%	41.9%
	Agree	57.5%	61.4%	28.9%	26.9%	20.6%	28.5%
	Strongly agree	28.8%	20.4%	7.0%	10.8%	6.2%	9.8%
The United States should send humans to Mars.	Strongly disagree	8.4%	9.7%	6.2%	4.4%	7.2%	6.0%
	Disagree	21.5%	32.0%	14.2%	14.2%	11.3%	14.8%
	Agree	42.3%	45.1%	45.5%	46.5%	49.5%	46.5%
	Strongly agree	27.7%	13.1%	34.2%	34.8%	32.0%	32.7%
Space exploration should not be a priority.	Strongly disagree	28.1%	16.7%				
	Disagree	37.5%	39.5%				
	Agree	24.0%	32.0%				
	Strongly agree	10.5%	11.8%				
We do not need to send humans to space because robots can do the work.	Strongly disagree	28.1%	16.7%				
	Disagree	37.5%	39.5%				
	Agree	24.0%	32.0%				
	Strongly agree	10.5%	11.8%				
Exploration is critical to prosperity and human progress.	Strongly disagree	6.0%	5.8%				
	Disagree	12.6%	17.2%				
	Agree	44.8%	48.3%				
	Strongly agree	36.7%	28.7%				

Gender

Age

		What is your age?						
		18 to 24	25 to 34	35 to 44	45 to 54	55 to 64	65 or older	Total
America leads the world in space exploration.	Strongly disagree	4.4	3.8	4.2	2.1	1.6	0.5	2.7
	Disagree	15.6	15.4	11.4	9.0	16.8	12.0	13.3
	Agree	63.7	59.6	49.1	62.2	58.6	63.6	59.5
	Strongly agree	16.3	21.2	35.3	26.6	23.0	23.9	24.5
The United States should send humans to Mars.	Strongly disagree	8.9	3.4	7.8	12.2	10.5	12.5	9.1
	Disagree	26.7	23.6	24.0	28.2	23.0	34.8	26.7
	Agree	49.6	48.6	40.7	41.5	44.0	39.7	43.9
	Strongly agree	14.8	24.5	27.5	18.1	22.5	13.0	20.3
Space exploration should not be a priority.	Strongly disagree	14.8	25.0	26.3	20.7	27.7	17.9	22.5
	Disagree	41.5	41.8	33.5	37.2	35.6	40.8	38.4
	Agree	34.1	26.4	26.9	28.7	24.1	28.8	27.9
	Strongly agree	9.6	6.7	13.2	13.3	12.6	12.5	11.3
We do not need to send humans to space because robots can do the work.	Strongly disagree	15.6	22.6	23.4	19.7	21.5	14.7	19.8
	Disagree	45.9	44.2	40.1	37.2	40.8	44.0	41.9
	Agree	27.4	26.4	22.8	34.0	28.3	31.5	28.5
	Strongly agree	11.1	6.7	13.8	9.0	9.4	9.8	9.8
Exploration is critical to prosperity and human progress.	Strongly disagree	5.9	4.3	3.0	6.9	7.9	7.6	6.0
	Disagree	10.4	9.1	12.6	22.9	15.2	17.9	14.8
	Agree	55.6	46.6	45.5	42.6	40.8	50.5	46.5
	Strongly agree	28.1	39.9	38.9	27.7	36.1	23.9	32.7

Ethnicity

		Which category best describes your ethnicity?						Total
		White/Anglo-Saxon	Hispanic/Latino	Black/African-American	Asian/Pacific Islander	Other	Prefer not to answer	
America leads the world in space exploration.	Strongly disagree	1.6	11.7	5.5	0.0	8.7	7.7	2.7
	Disagree	12.8	13.3	16.4	8.5	26.1	15.4	13.3
	Agree	61.3	41.7	56.4	63.8	39.1	69.2	59.5
	Strongly agree	24.3	33.3	21.8	27.7	26.1	7.7	24.5
The United States should send humans to Mars.	Strongly disagree	8.2	15.0	10.9	2.1	30.4	15.4	9.1
	Disagree	26.7	15.0	35.5	27.7	17.4	15.4	26.7
	Agree	44.8	45.0	36.4	46.8	30.4	61.5	43.9
	Strongly agree	20.4	25.0	17.3	23.4	21.7	7.7	20.3
Space exploration should not be a priority.	Strongly disagree	22.0	35.0	21.8	14.9	30.4	15.4	22.5
	Disagree	41.3	26.7	28.2	29.8	21.7	53.9	38.4
	Agree	26.3	20.0	35.5	51.1	30.4	7.7	27.9
	Strongly agree	10.4	18.3	14.6	4.3	17.4	23.1	11.3
We do not need to send humans to space because robots can do the work.	Strongly disagree	19.5	21.7	21.8	12.8	30.4	15.4	19.8
	Disagree	43.9	38.3	31.8	48.9	21.7	30.8	41.9
	Agree	28.4	23.3	32.7	23.4	30.4	38.5	28.5
	Strongly agree	8.2	16.7	13.6	14.9	17.4	15.4	9.8
Exploration is critical to prosperity and human progress.	Strongly disagree	5.9	8.3	5.5	2.1	8.7	15.4	6.0
	Disagree	14.6	15.0	17.3	12.8	13.0	15.4	14.8
	Agree	47.4	31.7	42.7	59.6	39.1	53.9	46.5
	Strongly agree	32.1	45.0	34.6	25.5	39.1	15.4	32.7

Income

		What is your combined annual household income?						Total
		Less than \$24,999	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 - \$149,999	\$150,000 to \$249,999	Greater than \$250,000	
America leads the world in space exploration.	Strongly disagree	3.5%	1.9%	2.9%	1.0%	7.7%	0.0%	2.7%
	Disagree	17.7%	10.9%	14.0%	8.0%	10.3%	25.0%	13.3%
	Agree	58.8%	64.0%	58.5%	53.0%	51.3%	62.5%	59.5%
	Strongly agree	20.0%	23.3%	24.6%	38.0%	30.8%	12.5%	24.5%
The United States should send humans to Mars.	Strongly disagree	11.8%	11.2%	7.2%	3.0%	7.7%	12.5%	9.1%
	Disagree	31.8%	25.5%	25.8%	23.0%	20.5%	25.0%	26.7%
	Agree	41.6%	41.0%	46.7%	47.0%	48.7%	50.0%	43.9%
	Strongly agree	14.9%	22.4%	20.3%	27.0%	23.1%	12.5%	20.3%
Space exploration should not be a priority.	Strongly disagree	19.2%	22.7%	22.6%	25.0%	35.9%	12.5%	22.5%
	Disagree	34.5%	37.6%	39.5%	43.0%	41.0%	75.0%	38.4%
	Agree	32.2%	26.7%	29.2%	22.0%	18.0%	0.0%	27.9%
	Strongly agree	14.1%	13.0%	8.6%	10.0%	5.1%	12.5%	11.3%
We do not need to send humans to space because robots can do the work.	Strongly disagree	17.3%	18.6%	22.1%	19.0%	25.6%	25.0%	19.8%
	Disagree	38.4%	40.1%	42.1%	53.0%	48.7%	50.0%	41.9%
	Agree	33.3%	30.1%	28.1%	19.0%	15.4%	12.5%	28.5%
	Strongly agree	11.0%	11.2%	7.7%	9.0%	10.3%	12.5%	9.8%
Exploration is critical to prosperity and human progress.	Strongly disagree	8.2%	7.1%	4.0%	2.0%	7.7%	12.5%	6.0%
	Disagree	17.7%	14.6%	14.6%	9.0%	12.8%	25.0%	14.8%
	Agree	48.2%	42.9%	48.4%	48.0%	43.6%	50.0%	46.5%
	Strongly agree	25.9%	35.4%	33.0%	41.0%	35.9%	12.5%	32.7%