

Public Opinion of Space Warfare: A Survey and Analysis

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INTRODUCTION

In a democracy, public opinion inevitably has an impact on decisions made by national leaders. With this in mind, this research provides survey data and analysis that establishes a quantitative baseline of the public's general tolerance of space warfare. More specifically, a range of hypothetical scenarios in which an adversary to the United States has acted provocatively were presented and respondents' willingness to support a first-strike or respond to an adversarial first-strike was measured. Initial study was conducted to determine if the public is more or less willing to support engagement in space as compared to other domains.

RESEARCH QUESTIONS

1. What is the general public sentiment towards war in space?
2. What types of events would notably generate or degenerate public support for a first strike of counter-first-strike in space?

METHODS

The survey was drafted and peer-reviewed by both space professionals and non-space professionals to promote clarity of concept and language, respectively. The survey consisted of 23 questions, including three demographic questions, used a 5-point Likert scale, and was hosted on the Qualtrics platform. The survey was distributed via social media and was open for one week (6 Jul 2020 - 12 Jul 2020). Response data was analyzed using the SPSS Statistics software package.

SAMPLE QUESTIONS

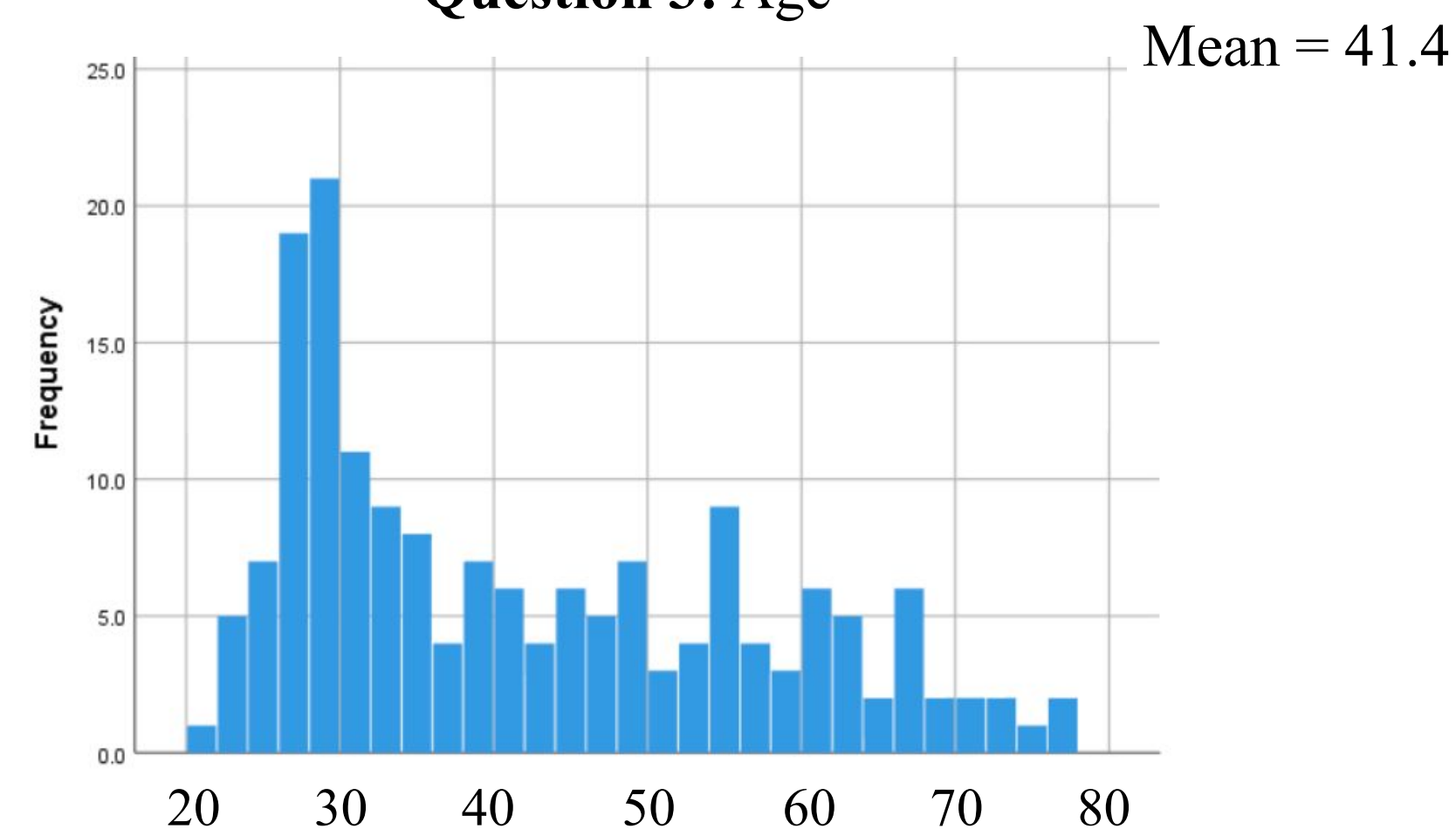
Questions 1-4: 1. Party; 2. Gender; 3. Age; 4. Knowledge of outer space.
Question 7: Suppose a U.S. intelligence satellite was attacked and destroyed by an adversary. The Department of Defense announces that the U.S. will "respond in a time and place of our choosing," but makes it clear the response will be to destroy at least one foreign satellite. Which type of satellite would you most likely support attacking in response?
Question 8: Suppose an adversary attacked and destroyed a U.S. intelligence satellite, which response would you be most likely to support?
Question 11: How important do you believe satellites are to U.S. national security?
Question 12: Suppose an adversary destroyed enough GPS satellites to render GPS services useless... Would you consider this an act of war?
Question 13: How important is preventing a conflict in space?
Question 14: To what extent do you agree/disagree with the following statement? Space war is preferable to war at sea.
Question 16: Suppose the U.S. had reason to believe that an attack on a U.S. intelligence satellite by a foreign satellite was imminent. Would you support a preemptive attack on the foreign satellite to protect the U.S. satellite?
Question 20: Suppose the Department of Defense claims that an adversary hacked a critical national security satellite, rendering it permanently useless. Would you support an attack on a foreign satellite in response?
Question 21: Suppose an adversary blew up a U.S. intelligence satellite. In considering a response, how much consideration should be given to potentially generating debris in the space environment?
Question 23: Suppose an adversary fired a missile at a U.S. intelligence satellite but missed. Would you support destroying an adversary satellite in response?

SURVEY SAYS

Question 1: Political Party		
Response	Count	%
Democrat	45	26.0
Independent	43	24.9
Republican	72	41.6
Other	13	7.5
Total	173	100

Question 2: Gender		
Response	Count	%
Male	82	47.4
Female	91	52.6
Other	0	0
Total	173	100

Question 3: Age



Question 8: Suppose an adversary attacked and destroyed a U.S. intelligence satellite, which response would you be most likely to support?			
#	Response	Count	%
1	No response or economic sanctions/costs	17	9.9
2	Attack in other domain (e.g., cyber)	22	12.9
3	Temporary attack on an adversary satellite (e.g., jamming)	30	17.5
4	Destroy an adversary satellite	65	38.0
5	Destroy multiple adversary satellites	37	21.6

Question 12: Suppose an adversary destroyed enough GPS satellites to render GPS services useless... Would you consider this an act of war?			
#	Response	Count	%
1	Definitely not	0	0
2	Probably not	5	2.9
3	Might or might not	27	15.6
4	Probably yes	49	28.3
5	Definitely yes	92	53.2

Question 20: Suppose the Department of Defense claims that an adversary hacked a critical national security satellite, rendering it permanently useless. Would you support an attack on a foreign satellite in response?			
#	Response	Count	%
1	Definitely not	4	2.3
2	Probably not	15	8.7
3	Might or might not	47	27.2
4	Probably yes	73	42.2
5	Definitely yes	34	19.7

Question 14: To what extent do you agree/disagree with the following statement? Space war is preferable to war at sea.			
#	Response	Count	%
1	Strongly disagree	23	13.3
2	Somewhat disagree	29	16.8
3	Neither agree nor disagree	77	44.5
4	Somewhat agree	30	17.3
5	Strongly agree	14	8.1

Question 16: Suppose the U.S. had reason to believe that an attack on a U.S. intelligence satellite by a foreign satellite was imminent. Would you support a preemptive attack on the foreign satellite to protect the U.S. satellite?			
#	Response	Count	%
1	Definitely not	8	4.6
2	Probably not	36	20.8
3	Might or might not	53	30.6
4	Probably yes	59	34.1
5	Definitely yes	17	9.8

FINDINGS

Result 1: Respondents with more knowledge of the space domain believe greater consideration should be given to potential generation of space debris.

Result 2: Republicans believe the Space Force is more important than Democrats and Independents.

Result 3: Respondents felt it was more important to prevent space conflict than conflict involving "boots on the ground."

Result 4: Result 3 does not appear to be significantly affected by age, political party affiliation, or gender.

Result 5. A latent variable, possibly a form of aggression, exists between several of the responses.

Result 6. With respect to the latent variable identified in Result 5: Republicans correlated more strongly than did Democrats and Independents; the middle and upper age groups correlated more strongly than did the youngest age group; gender did not significantly affect responses.

FUTURE RESEARCH

The prospects of war extending into space continue to increase. The lack of precedent raises several unique challenges, including public opinion. This research begins to pull the thread on public opinion, but additional research is needed, especially now that the Space Force has provoked greater and more regular public discussion than when the survey was conducted (summer 2020).

Other unique aspects of space warfare are also in need of further research. In particular, recent years have seen significant discussion on space deterrence, but significantly less so on deterrence's sibling - escalation. Studying the connection between space deterrence necessitates an understanding of space escalation. The nature of escalation in the space domain is important for purposes of strategy, as well as for reducing the likelihood of unintended escalation.

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