

James Webb Space Telescope and Change in Belief in a Supreme Being: Does the Source of Information Matter?

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ABSTRACT

This study sought to examine the influence of JWST information sources on change in belief in a supreme being. Data were analyzed using descriptive and inferential statistics. Of the 1009 participants surveyed, 46.7 % would be happy if JWST discovered alien life in space, while 44.9 % would be afraid. JWST information sources have a significant influence on the change in belief in a supreme being ($R = 0.395$, $R^2 = 0.156$, $Adj R^2 = 0.144$, $P < 0.05$). Sourcing for information about JWST from Facebook, Church/Mosque, and Religious Leaders was found to be more likely to cause a change in belief in the Supreme Being if intelligent alien life were to be discovered. Libraries were found not to significantly influence change in belief in a supreme being. As a result, it recommends that libraries remain objective sources of information, while religious organisations engage in more in-depth conversations about what could be out there in space.

Keywords: James Webb Space Telescope, Supreme Being, Information sources, Libraries

1. INTRODUCTION

After many years of construction and several delays, the James Webb Space Telescope (JWST) was successfully launched on an Ariane 5 rocket from Europe's Spaceport in French Guiana, South America, on December 25th, 2021. This \$10 billion observatory houses the world's largest and most powerful telescope. NASA, a prime contractor team led by Northrop Grumman Space Technology (NGST), the European Space Agency (ESA), and the Canadian Space Agency collaborated to develop it (CSA). The JWST was intended to be a follow-up mission to the wildly successful Hubble Space Telescope, allowing astronomers to see the first generations of stars.

JWST will look at a wide range of astronomical issues focused on four major themes: first light and reionization, galaxies development, the formation of stars and protoplanetary systems, and planetary systems and the origins of life. However, as seen by the numerous news items broadcast by the media (particularly by NASA), the main goals of JWST are steeped in evolutionary philosophy. According to one of NASA's web pages, the major aims of Webb are to research galaxy, star, and planet formation in the cosmos. To see the very first stars and galaxies that formed in the early universe, we must look deep into space to look back in time (because light time travels from there to here, the farther out we look, the further back we look), which is an indication of cosmological evolution, particularly alluding to the big bang, which many Abrahamic religious groups reject (Webb, 2022). However, if more people become aware of JWST through various sources, there is a risk that the atheistic worldview that dominates the beliefs of many in the cosmological community will impact religious people's belief in a supreme being. Many people predicted that JWST will validate the big bang theory and maybe even find extraterrestrial life in space. Depending on where information is obtained, whether through social media, friends, religious institutions, or libraries, it may have a lasting influence on people. This comes at a time when fake news is on the rise all across the world (Adetayo, 2021; Adetayo et al., 2021). Libraries, for example, have a reputation for providing users with high-quality, unbiased information. Would the use of libraries as a source of JWST information influence people's beliefs about God? Many people are wondering about these and other issues. Based on this context, the study seeks to determine the influence of JWST information sources on changes in belief in a supreme being.

1.1 Objectives of the study

The main objective of the study is to investigate the influence of JWST information sources on changes in belief in a supreme being. Specifically, the study investigated:

- i) the sources of information about JWST,
- ii) the reaction of students if aliens were to be discovered by JWST,
- iii) if students would change their belief in a supreme being if JWST discovers intelligent extraterrestrial life in space,
- iv) the influence of JWST information sources on changes in belief in a supreme being.

2. METHODS

A descriptive survey design was employed for the study. The population comprises all 3457 Adeleke University undergraduate students. 30 % from all departments at the institution were picked at random using a simple random sampling technique, generating a sample size of 1037. The researchers used a self-created structured questionnaire dubbed "James Webb Telescope and Change in Belief" in the investigation. The questionnaire was distributed using Google Forms. The survey link was distributed via WhatsApp, as this is the principal social media channel used by academics to communicate with students. 1009 students completed the questionnaire, accounting for 97 % of the sample size. The frequency counts, percentages, mean, and standard deviation was used to analyse the data, and the hypothesis was tested using linear regression at the 0.05 level of significance.

3. FINDINGS

The majority of respondents (59%) are females between the ages of 16 and 20, and the majority (83.1%) are Christians. This shows that the study group is young and mostly feminine, with Christianity as the dominating religion (Table 1).

Table 1: Socio-Demographic Characteristics of the Respondents

Socio-Demographic Characteristics	Categories	Frequency	Percent
Age Range	11-15	37	3.7
	16-20	754	74.7
	21-25	136	13.5
	26-30	27	2.7
	31 & above	55	5.5
Gender	Female	602	59.7
	Male	407	40.3
Religion	Christianity	849	84.1
	Islam	157	15.6
	Traditionalist	3	.3
	Total	1009	100.0

The study as indicated in Table 2 below revealed that most of the respondents do not source information about JWST. However, 35 % use Google to seek information about the telescope, followed by libraries, with 25 % using library facilities to get information on the JWST. For information on the telescope, 21.7 % turn to friends, while 21.1 % turn to Facebook. Religious leaders and religious places (church or mosque) are the least used information sources, accounting for 8.6 % and 7.9 % of all information sources, respectively.

Table 2: Sources of Information on the James Webb Space Telescope

S/N	Sources	Yes	No
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1.	Facebook	213(21.1%)	796(78.9%)
2.	Twitter	121(12.0%)	888(88.0%)
3.	Instagram	171(16.9%)	838(83.1%)
4.	YouTube	198(19.6%)	811(80.4%)
5.	Television	205(20.3%)	804(79.7%)
6.	Radio	121(12.0%)	888(88.0%)
7.	Online Newspapers	169(16.7%)	840(83.3%)
8.	Church/Mosque	80(7.9%)	929(92.1%)
9.	Blogs	204(20.2%)	805(79.8%)
10.	Google	353(35.0%)	656(65.0%)
11.	Family	120(11.9%)	889(88.1%)
12.	Friends	219(21.7%)	790(78.3%)
13.	Religious Leaders	87(8.6%)	922(91.4%)
14.	Library	264(26.2%)	745(73.8%)

As captured in Table 3, the majority (46.7 %) would be happy if JWST discovered alien life in space, while a similar number (44.9 %) would be afraid. Sadness and anger had the lowest percentages of reactions, with 5.1% and 3.4%, respectively.

Table 3: Reaction to the Discovery of Aliens by JWST

SN	Reactions	Frequency	Percent
1	Angry	34	3.4
2	Fear	453	44.9
3	Sad	51	5.1
4	Happy	471	46.7
Total		1009	100.0

According to Table 4, if the JWST detects intelligent extraterrestrial life in space, 12.8 % will reconsider their belief in a supreme being. This suggests that any discovery of intelligent extraterrestrial life may change the belief of 12.8 % from theism to atheism.

Table 4 – Change in belief in Supreme Being

SN	Category	Frequency	Percent
1	No	880	87.2
2	Yes	129	12.8
Total		1009	100.0

The findings in Table 5 indicate the influence of information sources on change in belief in the Supreme Being with an R² of 0.156. The p-value of 0.000, as shown in Table 5 (At the 0.05 level, is statistically significant.). This suggests that information sources jointly contribute to a change in belief in the Supreme Being by 15.6 %. The adjusted R² represents the true influence of the independent variables on the dependent variable. This indicates that information sources jointly contribute to change in belief in the Supreme Being by a combined 14.4 %. In other words, information sources contribute to around 14.4 % of the change in belief in the Supreme Being among the study group. The remaining variance might be explained by other causes. It is important to note that the major contributors to the influence of information sources on change in belief in the Supreme Being are Facebook, Church/Mosque, and Religious Leaders, which were found to be significant under the coefficients section of Table 5. This implies that those that source information about JWST from Facebook, Church/Mosque, and Religious Leaders would more likely have a change in belief in the Supreme Being if intelligent alien life were to be discovered. Libraries were found not to significantly influence change in belief in a supreme being.

Table 5: Information Sources and Change in Belief in Supreme Being

Model Summary						
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate		
1	.395 ^a	.156	.144	.309		
ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.569	14	1.255	13.139	.000 ^b
	Residual	94.939	994	.096		
	Total	112.507	1008			
Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.577	.052		11.155	.000
	Facebook	.181	.033	.221	5.544	.000
	twitter	-.008	.037	-.008	-.212	.832
	Instagram	-.043	.035	-.048	-1.234	.218
	Youtube	.057	.033	.068	1.725	.085
	TV	-.009	.033	-.011	-.278	.781
	Radio	.020	.040	.019	.488	.626
	Online Newspaper	.059	.036	.066	1.636	.102
	Church/Mosque	.179	.045	.145	3.953	.000
	Blog	-.019	.031	-.022	-.593	.553
	Google	-.046	.028	-.065	-1.650	.099
	Family	-.013	.040	-.012	-.321	.748
	Friends	.000	.031	.000	.008	.994
	Religious Leaders	.163	.046	.137	3.522	.000
Library	-.024	.028	-.031	-.838	.402	

4. DISCUSSIONS

In today’s world, social media has become a major source of information for young people who have been found to adopt technology better than older generations (Adetayo & Williams-Ilemobola, 2021). However, when it comes to information about Advance telescopes like JWST, students were found to patronize Google, the largest search engine in the world, and libraries more than social media. The reason for this could be that most people are not that interested in space (YellowKazooie, 2014) and when such information comes to their awareness, they tend to intentionally search about this on Google or libraries. Although most students generally ignore subjects like telescopes, the result is fascinating given that libraries trump other sources except Google.

The study also discovered that more people would be happy than afraid if intelligent aliens were to be discovered by JWST. This is consistent with the findings of Kwon et al. (2018), who found that people would have a significantly more positive reaction than negative to the discovery of extraterrestrial life. The reason for the positive reactions to the potential future discovery of intelligent alien life may be because the universe is too big for us to be alone or perhaps it is because many already believe in some form of life such as angels (Beall, 2021; Radford, 2018). Likewise, as reported by Haarsma (2019), a survey of religious people found that most are comfortable with the idea of intelligent aliens and do not see it threatening their beliefs. Furthermore, the study found that if the JWST detects intelligent extraterrestrial life in space, 12.3 % will reconsider their belief in a supreme being and it was discovered that where students source information about JWST significantly contribute to this. In particular, Facebook, Churches/Mosques, and Religious Leaders would be the major cause of this if that were to take place. The reason for this could be because of the trust people have in religious leaders and houses,

which have often not emphasized aliens in their teachings. As a result, the reality of aliens may make some people also disbelieve all they've been taught on the pulpits and in mosques. Facebook influencing change in belief in a supreme being is a bit surprising but not out of order since young people make use of it daily. Libraries were found not to influence change in belief in a supreme being given that people that come to study in the library make their own decisions as they are not imposed by biases.

5. CONCLUSION

The study concluded that JWST information sources can influence people's belief in a supreme being, with Facebook, Church/Mosque, and Religious Leaders functioning as influential factors. Libraries were not identified as significant influencers, but they were identified as key source of information on JWST after Google. If intelligent aliens were discovered by JWST, more people would be delighted than terrified, yet most do not even believe in their existence. As a result, it recommends that libraries remain unbiased sources of information, while religious organisations should engage in more in-depth discussions about what could be out there in space.

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