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Reexamining the “Separation of Church and Space”: Evangelical Protestant Support for Space Exploration in the Trump–Pence Age

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Abstract: President Donald Trump began his presidency in January 2017 by exclaiming, “We stand at the birth of a new millennium, ready to unlock the mysteries of space . . . ” His “Make America Great Again” agenda has included a reinvigorated space policy—spearheaded by the creation of the Space Force military branch and NASA’s *Launch America* in partnership with the private sector. Prior to this administration, a 2015 study by Ambrosius found that Evangelical Protestants are the least supportive of space exploration when compared with other religious traditions and the public. These findings emerged from the analysis of several national surveys conducted between 2009 and 2011. This present study uses similar methods to revisit these findings in light of Evangelicals’ robust political support for the president and Vice President Mike Pence, the chair of the National Space Council who frequently evokes religious imagery in space-related speeches. Analysis of the General Social Survey conducted between 2004 and 2018 reveals that Trump’s presidency may have modestly altered this wall of separation. Evangelicals in 2018 remain significantly lower than non-Evangelicals in space knowledge, interest, and policy support, but they exhibit greater increases than the non-Evangelical population in space interest and support over levels during the Obama and Bush presidencies.

Keywords: space exploration; space policy; Evangelical Protestantism; religion and politics; President Donald Trump; Vice President Mike Pence; Space Force; General Social Survey

“No challenge can match the heart and fight and spirit of America. We will not fail. Our country will thrive and prosper again. We stand at the birth of a new millennium, ready to unlock the mysteries of space, to free the Earth from the miseries of disease and to harness the energies, industries and technologies of tomorrow. A new national pride will stir ourselves, lift our sights and heal our divisions.”

—President Donald Trump’s inaugural address, 20 January 2017 (Malik 2017)

1. Introduction: Space and Religion in the Trump Age

Evangelical Protestants express lower levels of support for space exploration than the population as a whole and other religious traditions (Ambrosius 2015, 2016). Ambrosius (2015) referred to this observation as the “separation of church and space.” Interestingly, and perhaps paradoxically, the Trump–Pence administration has emphasized both the priorities of religious conservatives (including Evangelical Protestants) and the promise of space exploration.

President Donald Trump followed the precedent of Presidents Johnson, Nixon, and Reagan by bringing space exploration into his inaugural address at the dawn of his presidency (Malik 2017). Within the first year of his administration, President Trump signed (1) an executive order on 30 June 2017 re-establishing the National Space Council, which previously ended in 1993, and (2) Space Policy

Directive-1 on 11 December 2017 with plans to revisit the Moon and eventually Mars in partnership with the private sector. At the signing of the latter, Vice President Pence firmly placed space exploration within the President's "Make America Great Again" agenda when he said, "Under President Trump's leadership, America will lead in space once again on all fronts. As the President has said, space is the 'next great American frontier'—and it is our duty—and our destiny—to settle that frontier with American leadership, courage, and values" (Wang 2017).

In March 2018, President Trump first spoke about the need to create an independent space force in a speech to the Miramar Marine Corps Air Station in San Diego, California: "Space is a war-fighting domain just like the land, air, and sea . . . We have the Air Force, we'll have the space force" (Koren 2018b). In traditional Trump style, he added off the cuff remarks taking credit for the idea: "I was saying it the other day—cause we're doing a tremendous amount of work in space—I said, maybe we need a new force. We'll call it the space force. And I was not really serious. And then I said, what a great idea. Maybe we'll have to do that. That could happen. That could be the big, breaking story" (Koren 2018b). In reality, these comments furthered a previous 2017 proposal by Representatives Jim Cooper (D—Tenn.) and Mike Rogers (R—Ala.) to create a Space Corps within the Department of the Air Force, which passed in the U.S. House of Representatives but failed during negotiations with the U.S. Senate. Speaking to the National Space Council in June 2018, President Trump gave orders to the U.S. Department of Defense to establish the Space Force as a new branch of the Armed Forces, despite alternating calls for the Force to remain within the Air Force. The 2020 National Defense Authorization Act would eventually create an independent Space Force when signed by President Trump in December 2019.

Vice President Pence, who as chair of the reconstituted National Space Council became the space spokesperson for the administration, has explicitly linked faith and space by using religious imagery when speaking to various space constituencies (Koren 2018a). For example, Pence concluded his remarks with the following words at the 34th Space Symposium in Colorado Springs, Colorado, in April 2018:

And as we renew our commitment to lead, let's go with confidence and let's go with faith—the faith that we do not go alone. For as millions of Americans have believed throughout the long and storied history of this nation of pioneers, I believe, as well, there is nowhere we can go from His spirit; that if we rise on the wings of the dawn, settle on the far side of the sea, even if we go up to the heavens, even there His hand will guide us, and His right hand will hold us fast. It's an honor to be with you today. I leave here today with renewed confidence that with your support, with the efforts of the National Space Council, with the hard work of all who labor across the nation to forge America's future in space, with the strong leadership of President Donald Trump, the courage of a new generation of explorers, and with God's help, I know America will once again astonish the world with the heights that we reach and the wonders we achieve, and we will lead the world into space once again. Thank you. God bless you. And God bless the United States of America. (Pence 2018a)

This rhetoric is not an isolated incident—Pence has included similar religious references in speeches to the National Space Council and at the Pentagon ((Pence 2017, 2018b), respectively). It is unclear if these spiritual allusions are simply a product of Pence's faith-based public persona or if they are a strategic effort to unite church and space for more hesitant believers (Coppins 2018; Koren 2018a). The audience has generally consisted of space professionals, but aspects of the remarks may be covered by the news media to achieve broader reception.

Evangelical Protestants have been steadfast supporters of the Trump–Pence candidacy and presidency—with estimates that some four-fifths of Evangelical voters supported the ticket in the 2016 election (Martínez and Smith 2016). There are, however, Evangelical critics of President Trump. *Christianity Today* (CT), a publication founded by evangelist Billy Graham to "help evangelical Christians interpret the news in a manner that reflects their faith," called for the President's removal from office during impeachment proceedings and labelled him as "morally lost and confused" (Galli 2019). CT has

nevertheless stood by Vice President Pence—even citing, approvingly, comments by Southern Baptist leader Richard Land that Pence “is the 24-karat-gold model of what we want in an evangelical politician” (Coppins 2018; Silliman 2020). In the lead-up to the 2020 Vice Presidential Debate, CT published a list of Pence’s major contributions to the administration’s policy goals, which included his support of space exploration: “In addition to his passion for religious conservative causes, one of Pence’s main policy focuses has been the heavens. The vice president has ‘taken the lead on rebuilding the nation’s space program’ . . . ” (Silliman 2020).

In light of this context, this current research revisits Ambrosius’ (2015) conclusions by examining Evangelical support for space exploration in 2018—after at least one-year of solid support for various high-profile space initiatives by the Trump–Pence administration—in comparison to support during the two prior administrations. This study finds that Evangelicals remain significantly lower than non-Evangelicals in space knowledge, interest, and policy support, as they were during the Bush and Obama administrations. Support for space exploration, measured by the proportions of the population who are “very interested” and support maintaining or increasing space funding, has steadily grown over the three presidential administrations of the 21st century. Thus, it is not entirely surprising to note that Evangelicals have also increased in space interest and support, but Evangelicals do exhibit modestly greater increases than the broader population in the highest categories of interest and support over the levels observed during the Obama era. A regression analysis shows that Evangelicals’ significant net gain in funding support during the Trump administration holds even when socio-demographic and political controls are added. The paper concludes by cautioning against inferring too much from these indirect findings and exploring implications for future work at the crossroads of religion and space opinions.

2. Theoretical Framework: Evangelical Protestantism and U.S. Politics/Policy

While this paper is a study of the public opinion of space exploration, this literature review instead emphasizes theoretical explanations of why and how Evangelical identity might matter for space attitudes. For reviews of literature on the broader determinants of space opinions, see for examples: Launius (2003); Nadeau (2013); Roy et al. (2000); Whitman Cobb (2011, 2020).

2.1. Religion and Politics Theory

Why might one expect that Evangelical Protestants have distinct views of space exploration? Evangelical Protestantism is one of the major religious traditions in America—alongside other Christian traditions (Mainline Protestantism, Black Protestantism, Anglo Catholicism, and Latino Catholicism) and non-Christian traditions (Judaism, Islam, Hinduism, etc.). Scholars of religion and politics in the U.S. identified political divisions *between* different religious traditions, such as Catholics and Protestants (religious differences confounded by different ethnicities and national origins), since the early twentieth century. This Durkheimian approach emphasizing religious *belonging* has been termed the *ethnoreligious theory* (Smidt et al. 2009b).

More contemporary scholarship has argued that differences over traditional (conservative) and modern (liberal/progressive) religious beliefs have divided followers *within* religious traditions and united traditionalists and modernists with their respective counterparts in other traditions. From this perspective, it is religious *beliefs* that matter politically rather than primarily the religious groups to which people belong—as conservative/liberal theology feeds into conservative/liberal political ideology. This approach has been labelled the *religious restructuring* or *culture war* thesis following Wuthnow (1988) and Hunter (1991), respectively (Smidt et al. 2009a). During recent electoral controversies concerning the culture war and “values voters,” researchers uncovered a *God gap* existing between those voters who attend church more frequently and those who do not—thus emphasizing a third measure of religious *behavior* (Smidt et al. 2010). Worship attendance is a public religious behavior, while prayer or Bible reading are private behaviors. Taken together, many scholars of the religious causes of public opinion emphasize the potential impacts of all “3Bs,” religious *belonging, believing,*

and *behaving*, which has been labelled—perhaps incorrectly—by others as the *religious commitment* approach (Djupe and Calfano 2014; Smidt 2019; Smidt et al. 2009a).

An alternative theory, called the *social networking* approach, argues that while other scholarship may find effects of the 3Bs on political opinions and behaviors, this perspective tells us nothing about the mechanisms by which preferences are conveyed to parishioners (Djupe and Calfano 2014). Scholars must instead find ways to control message exposure, perhaps through experimental means, and then measure adoption of beliefs. Messages can be conveyed to religious publics across several domains: via clergy in churches, other religious leaders outside churches, and politicians or other political elites/opinion leaders (Djupe and Calfano 2014). Messages may or may not be adopted by individual believers. Some types of messages—such as those employing covert “God talk” or displaying a basis in prayer and scripture reading—might be more effective at shaping some religionists’ views.

Another contemporary approach argues for a return to religious belonging—that religious organizations exert institutional effects on their memberships that shape participants’ preferences. Ambrosius (2011) terms this approach *polity replication* because it argues that those who identify with churches employing decentralized congregational polity (e.g., Baptists and many other Evangelicals) prefer decentralization in society, while members of churches with centralized/hierarchical episcopal polity (e.g., Catholics) conversely prefer more centralization in society.

Researchers might expect that Evangelicals will differ from other traditions on a variety of policy areas, potentially including large-scale, expensive activities of government like space exploration. Religious and political beliefs as well as religious behaviors might also matter—and could be the forces responsible for any Evangelical differences from the general population or other traditions.

2.2. Religion and Space Attitudes

How might Evangelical Protestantism exert an effect on space attitudes? All of the discussed operationalizations of religion could potentially impact space policy views and represent various explanations for any Evangelical differences on space. Tradition, along with an individual church’s organizational structure and the messages its ministers convey, adopted beliefs, and religiously-motivated behaviors, all must be explored as possible avenues for religious influence. Most statistical analyses of public opinion related to space disregard religious predictors (e.g., (Whitman Cobb 2020)). Nadeau (2013) is an exception—the multivariate models do include a measure of church attendance, but not as an expression of religious behavior but as a theorized facet of ideology alongside partisanship and political orientation. This variable was not a statistically significant predictor of space policy funding in Nadeau’s models—and thus, gave the impression that religion does not matter for space policy attitudes (or at least not for space funding preferences).

Ambrosius (2015) was the first comprehensive study of how various conceptions of religion could shape various dimensions of space attitudes.¹ This study explored the impact of the 3Bs on antecedents of space policy support (space knowledge and interest), space policy support (support for space funding), recognition of space benefits, and expectations of future space accomplishments. Ambrosius found that Evangelical Protestants were the one religious tradition that consistently stood out in its differences with other traditions and with the broader population—in the negative direction. Furthermore, traditional religious beliefs and behaviors, including more frequent church attendance and more literal views of scriptures and origins, were also negatively associated with support for

¹ Ambrosius (2015) was labeled by another article in the journal *Space Policy* as “an exemplary model of quantitative analysis” that “serves as a good model for future quantitative space policy studies because the analysis is theoretically motivated, the methods and data are appropriate to the questions at hand, and the study’s implications are clearly discussed with reference to theory and policy” (Pomeroy 2019, p. 16).

space.² Note that the results show *lower* levels of Evangelical support for space activities overall, not across-the-board *opposition* to space exploration by members of the tradition.

Ambrosius (2015) also includes a measure capturing the social networking approach in the models of space support. Specifically, a model of one's recognition of space benefits to society (space exploration does "more good than harm," versus "more harm than good") finds increased odds of agreement with a positive assessment of space exploration's effects *if* one's clergy member speaks positively about science, controlling for other factors. This finding demonstrates that messages about topics related to policy from religious leaders—in this case, positive views of science in general—can impact the policy views of parishioners. Ambrosius does not assess Djupe and Calfano's (2014) other possible sources of message exposure—including exposure to religious messages from political leaders such as Vice President Pence. This present study attempts to measure the effect of the Trump–Pence administration's messaging on Evangelical Protestants' space attitudes, albeit indirectly. While the religious commitment approach to religion and politics has demonstrated utility when applying it to space exploration, so has the newer social networking approach. The latter represents a promising method for further studying the mechanisms by which religious believers' space policy attitudes are formed—in indirect (this study) or, when possible, direct methods.

3. Research Questions and Hypotheses

Past research was motivated by the broad question: how does religion, variously defined, affect attitudes toward space and space policy in the general public, if at all? Ambrosius (2015, p. 20) specifically asks, among other questions, "Do religious traditions differ from the broader public in their space knowledge, interest, policy support, and expectations? In particular, how do Evangelicals differ from society's views and the views of other traditions' members?" The answer to those questions, given the findings of Ambrosius' analysis of 2009–2011 General Social Survey and Pew Research Center data, is that Evangelical Protestants rank significantly lower across the board on nearly all measures of support for space exploration—when compared with the general public and other religious traditions. This present study extends the previous work by asking two empirical questions:

- (Q1) Do Evangelical Protestants continue to rank below non-Evangelicals in space knowledge, interest, and support for space funding following the narrow cross-section of time analyzed by Ambrosius?
- (Q2) Do Evangelical Protestants in the Trump age express greater space knowledge, interest, or support than Evangelicals during previous presidential administrations?

The corresponding hypotheses under study are:

- (H1) Evangelical Protestants continue to rank below non-Evangelicals in space knowledge, interest, and support for space funding during the latter years of the Obama presidency and the beginning period of the Trump presidency.
- (H2) Evangelical Protestants in the Trump age express greater space knowledge, interest, and support than Evangelicals during the Bush (43) and Obama eras.

4. Data and Methods

The hypotheses are tested using data from the publically available, cumulative General Social Survey (GSS) data file. The GSS is a biennial representative survey of US adults over the age of 18. The analysis is limited to iterations of the survey collected during the George W. Bush,

² Some commentators misunderstood the meaning of "negative" effects. For example, *Answers in Genesis* (the operator of the Creation Museum) astronomer Dr. Danny Faulkner (2014) wrote that, "This report at least implies that these once-respected practices and beliefs [church attendance and high view of scripture] are harmful to society. While not as hostile as the attitudes of Richard Dawkins and Bill Nye, it is condescending." Ambrosius' (2015) findings claim an inverse relationship between variables, not a negative effect on society.

Barack Obama, and Donald Trump presidencies.³ Due to the operational definition of Evangelical Protestantism—defined as Protestants who have had a born-again experience (to maintain consistency with Ambrosius (2015) and Pew methods)—the analysis is further restricted to the 2004–2018 GSS years (omitting 2002 for the Bush presidency).⁴ The variable *reborn* is included consistently since 2004 on each iteration of the GSS, but was previously included in 1988, 1991, and 1998 only. The survey years under analysis align with recent presidencies as follows: Bush (2004–2008), Obama (2010–2016), and Trump (2018). All years between 2004 and 2018 are analyzed together, which requires that all independent and dependent variables be recoded if measurement differences exist between collection years.⁵

Table 1 describes the sample size and Evangelical Protestant proportions for the GSS conducted between 2004 and 2018. While the presence of born-again Protestants has generally increased over time, levelling out around 30% every year after 2008, the level among all respondents (N = 21,121) over this period is just over one-quarter (1.8 percentage points lower if non-white born-again Protestants are excluded). This prevalence signifies that this tradition is a powerful force in American society and politics—offering significant electoral backing to the Republican Party (Martínez and Smith 2016).

Table 1. Total General Social Survey (GSS) Sample Sizes and Evangelical Protestant Proportions, 2004–2018.

Year	Total N	Evangelical N	Evangelical %	Presidency
2004	2814	362	12.9%	Bush
2006	4512	892	19.8%	Bush
2008	2023	623	30.8%	Bush
2010	2044	598	29.3%	Obama
2012	1975	615	31.1%	Obama
2014	2538	764	30.1%	Obama
2016	2867	906	31.6%	Obama
2018	2348	721	30.7%	Trump
TOTAL	21,121	5481	26.0%	

NOTES: Evangelical Protestant tradition recoded from *relig* (Protestant) and *reborn* (Yes: “Would you say you have been ‘born again’ or have had a ‘born again’ experience—that is, a turning point in your life when you committed yourself to Christ?”). Tradition identified by born again experience, rather than denomination of congregation, to maintain continuity with previous study and Pew Research Center methods. 2002 omitted from Bush era surveys because *reborn* was not included consistently until 2004. GSS weight WTSS applied.

Ambrosius (2015) analyzes the GSS and several Pew Research Center surveys administered around the same time. While several Pew surveys administered during the Trump administration are available and include religion *and* space variables, the decision was made to limit this present analysis to three core space measures included in the GSS. Pew surveys ask about space exploration regularly, but often vary in type of measure and question wording. The GSS is more consistent over time, allowing a direct comparison between years and, in this case, presidential administrations.

Table 2 identifies and describes the three GSS space measures under analysis: space knowledge (which sums three science knowledge questions related to basic space science, but not space exploration

³ President Bush drew significant support from Evangelicals but did not directly connect his space policy goals to religion as much as Vice President Pence. For example: one prominent space speech delivered at NASA headquarters included the phrase “god willing” (quoting astronaut Eugene Cernan) and referred to outer space as the “heavens,” but did not develop the connection further (Bush 2004). Evangelical support during the Bush administration is included in this paper to serve as a baseline and to broaden the scope of the analysis.

⁴ The GSS is weighted using the weight WTSS, which takes into consideration the sub-sampling of non-respondents and the number of adults per household. Because only GSS iterations since 2004 are included in this analysis, the weight WTSS is the same as if the weight WTSSALL were applied.

⁵ The only variable included in this study that was measured differently during these years is income. There are three income measures used across the survey years: *income98*, *income06*, and *income16*. These were combined into a single variable with 11 consistent categories. The highest category begins at the 1998 amount.

or policy in particular); space interest (a three-point ordinal scale of interest with “very interested” as the highest category); and space policy support (support for funding space exploration or the space exploration program, operationalized in three categories with “too little” as the highest category). See Appendix A for exact question wording and the recoding syntax for all GSS space variables under analysis. (Questions for other religious, socio-demographic, and political variables are not included, but can be found in the GSS codebook.) The two GSS measures of space funding (*natspac*, *natspacy*) are combined into a single variable despite modestly different question wording for the higher level analysis (see Appendix B for support for this strategy).

Table 2. Space Exploration Variables in the General Social Survey (GSS), 2004–2018.

Name	Years Available	Original Variable(s)	Questions	Range
<i>Space Knowledge</i>	2006–2018	<i>bigbang</i>	The universe began with a huge explosion. Is that true or false?	0–1
		<i>earthsun</i>	Now, does the Earth go around the Sun, or does the Sun go around the Earth?	0–1
		<i>solarrev</i>	How long does it take for the Earth to go around the Sun: one day, one month, or one year?	0–1
			-Score correct out of three	0–3
<i>Space Interest</i>	2008–2018	<i>intspace</i>	Issues about space exploration: are you very interested (3), moderately interested (2), or not at all interested (1)?	1–3
<i>Space Policy Support</i>	2004–2018	<i>natspac</i> , <i>natspacy</i>	[The] space exploration [program]: are we spending too much (1), too little (3), or about the right amount (2) on [the] space exploration [program]?	1–3
			-Dummy variable: right amount + too little	0–1

NOTES: Ranges as indicated have all been recoded from the original variables so that higher scores denote greater space knowledge, interest, and support.

Question 1 is first assessed by an analysis of Evangelical and non-Evangelical means for all space-related dependent variables and *t*-tests for significant differences between group means during each presidency (Table 3). Question 2 is then evaluated by a comparison of proportions of Evangelicals and non-Evangelicals within the highest categories of space interest and support during each administration and the change between administrations (Tables 4 and 5).

Table 3. Space Exploration Variable Means for Non-Evangelical Protestant and Evangelical Protestant Respondants with Significance Level of Differences, GSS 2004–2018.

Variable (range)	Bush			Obama			Trump		
	Non-Evang., 04–08	Evang., 04–08	Sig. level	Non-Evang., 10–16	Evang., 10–16	Sig. level	Non-Evang., 18	Evang., 18	Sig. level
Space knowledge (0–3)	1.71	1.32	0.001	1.64	1.29	0.001	1.47	1.20	0.001
<i>intspace</i> (1–3)	1.90	1.84	NS	1.97	1.78	0.001	2.00	1.82	0.001
<i>natspac</i> (1–3)	1.80	1.66	0.001	1.96	1.80	0.001	2.00	1.89	0.05
<i>natspacy</i> (1–3)	1.78	1.65	0.001	1.95	1.79	0.001	2.05	1.81	0.001
<i>natspacy</i> combined (1–3)	1.79	1.66	0.001	1.96	1.80	0.001	2.03	1.85	0.001

NOTES: Space knowledge sums three GSS variables: *bigbang*, *earthsun*, and *solarrev*. Bush era variables are measured from 2004–2008 with the exceptions of *intspace* (2008 only) and the space knowledge score (2006–2008). GSS weight WTSS applied. NS = not significant.

Question 2 is also analyzed by split Binary Logistic Regression Models of Evangelical and non-Evangelical funding support from 2004 to 2018 (Table 6). The dependent variable is a binary measure: a score of “1” denotes belief that funding for space exploration is “too little” or “just [the] right amount” (versus a score of “0” for “too much”). Whitman Cobb (2011) refers to this combined category as an “issue public” for space exploration. The key independent variable is a dummy for 2018 respondents—which will show whether Evangelicals in the Trump era are significantly different in space support from Bush or Obama era counterparts, and whether this difference in support differs

from that of non-Evangelicals. Following [Ambrosius \(2015\)](#) and other studies of space attitudes, the models include controls for socio-demographics and other characteristics. Control variables include sex (male dummy), race (black dummy), ethnicity (Hispanic dummy), birth cohort (before or after baby boomers generation from 1946 to 1965), education, income, political ideology (conservatism scale), political party (Republican and independent dummies), and church attendance (religious behavior scale). To simplify analysis, this study does not consider specific religious beliefs. While [Ambrosius \(2015\)](#) included a measure of region (South dummy—not significant in any models), this study omits region due to [Whitman Cobb’s \(2020\)](#) findings that southern residents are not any more supportive (maybe less so) of space spending than other regions despite the concentration of space facilities in the South. An additional specification for each sample adds in the antecedents of support, space science knowledge and space interest, as independent variables to explore any changes to the findings and whether a 2018 effect remains.

Table 4. Percentages of GSS Respondents Across Categories of Space Interest - Full Sample vs. Evangelicals, 2008–2018.

Categories (<i>intspace</i>)	Bush		Obama		Trump	
	Full Sample, 08	Evang., 08	Full Sample, 10–16	Evang., 10–16	Full Sample, 18	Evang., 18
Very interested	22.4%	20.0%	25.9%	15.6%	27.9%	20.2%
Change from previous:	–	–	+3.5	–4.4	+2.0	+4.6
Moderately interested	44.8%	44.3%	45.4%	46.4%	44.4%	41.5%
Change from previous:	–	–	+0.6	+1.9	–1.0	–4.9
Not at all interested	32.8%	35.7%	28.7%	38.0%	27.7%	38.3%
Change from previous:	–	–	–4.1	+2.3	–1.0	+0.3

NOTES: The variable *intspace* is only available for 2008 during the Bush presidency. GSS weight WTSS applied.

Table 5. Percentages of GSS Respondents Across Categories of Space Policy Support – Full Sample vs. Evangelicals, 2004–2018.

Categories (<i>natspac/y</i> variables combined)	Bush		Obama		Trump	
	Full Sample, 04–08	Evang., 04–08	Full Sample, 10–16	Evang., 10–16	Full Sample, 18	Evang., 18
Increase funding (“too little”)	15.7%	10.7%	24.4%	17.5%	26.3%	17.2%
Maintain funding (“just right amount”)	47.5%	44.4%	47.0%	44.5%	50.3%	50.9%
Increase/Maintain combined	63.2%	55.1%	71.4%	62.0%	76.6%	68.1%
Change from previous:	–	–	+8.2	+6.9	+5.2	+6.1
Less funding (“too much”)	36.8%	44.9%	28.6%	38.0%	23.4%	31.9%

NOTE: GSS weight WTSS applied.

Table 6. Split Binary Logistic Regression Models (BLRM) of Support for Maintaining/Increasing Space Funding Among Evangelical and Non-Evangelical Respondents, GSS 2004–2018.

Variables	Model 1 <i>Evangelicals</i>	Model 2 <i>Evangelicals</i>	Model 3 <i>Non-Evang.</i>	Model 4 <i>Non-Evang.</i>
2018/Trump era (year recode, 0–1 dummy)	0.334 ** (0.103)	0.358 * (0.158)	0.455 *** (0.073)	0.301 ** (0.112)
Male (sex recoded, 0–1 dummy)	0.299 *** (0.066)	–0.071 (0.118)	0.195 *** (0.046)	–0.260 ** (0.083)
Black (race recoded, 0–1 dummy)	–0.312 *** (0.088)	0.025 (0.161)	–0.821 *** (0.076)	–0.659 *** (0.135)
Hispanic (<i>hispanic</i> recoded, 0–1 dummy)	–0.311 * (0.121)	–0.282 (0.202)	–0.320 *** (0.063)	–0.045 (0.112)
Pre–1946 birth (age recoded, 0–1 dummy)	0.224 * (0.097)	0.148 (0.161)	–0.095 (0.070)	–0.125 (0.122)
Post–1965 birth (age recoded, 0–1 dummy)	0.296 *** (0.072)	0.253 † (0.129)	0.196 *** (0.051)	0.115 (0.089)

Table 6. Cont.

Variables	Model 1 <i>Evangelicals</i>	Model 2 <i>Evangelicals</i>	Model 3 <i>Non-Evang.</i>	Model 4 <i>Non-Evang.</i>
Education (degree, 0–4)	0.238 *** (0.032)	0.171 ** (0.057)	0.237 *** (0.022)	0.211 *** (0.039)
Income (income98/06/16 recoded, 1–8)	0.060 *** (0.017)	0.066 * (0.029)	0.037 ** (0.011)	0.052 ** (0.020)
Conservatism (polviews recoded, 1–5)	0.023 (0.040)	0.070 (0.074)	−0.046 ‡ (0.028)	−0.032 (0.049)
Republican (partyid recoded, 0–1)	0.285 ** (0.099)	0.427 * (0.175)	0.281 *** (0.071)	0.427 ** (0.128)
Independent (partyid recoded, 0–1)	0.094 (0.086)	0.063 (0.152)	0.035 (0.053)	−0.067 (0.091)
Church attendance (attend recoded, 1–6)	−0.081 *** (0.020)	−0.061 ‡ (0.035)	−0.017 (0.014)	−0.021 (0.024)
Space interest (intspace recode, 1–3)	–	1.280 *** (0.091)	–	1.230 *** (0.060)
Space knowledge (summative score, 0–3)	–	0.115 ‡ (0.062)	–	0.027 (0.042)
Intercept	−0.528 ** (0.178)	−2.938 *** (0.369)	0.050 (0.119)	−2.123 *** (0.235)
N	4444	1758	10,030	3805
χ^2 (degrees of freedom)	264.713 *** (12)	339.200 *** (14)	549.887 *** (12)	738.074 *** (14)
Nagelkerke Pseudo R ²	0.081	0.253	0.076	0.250

NOTES: Models 2 and 4 are restricted to GSS years 2008–2018 due to the availability of *intspace* and the space knowledge questions. A score of “1” on the dependent variable denotes belief that funding for space exploration is “too little” or “just [the] right amount” (versus a score of “0” for “too much”). Original GSS variable names and ranges in parentheses after each independent variable description. Binary logit coefficients with standard errors in parentheses. Omitted reference categories for nominal independent variables: 2004–2016 (pre-Trump), female, non-black, not Hispanic, baby boomer (date of birth between 1946 and 1964), and Democrat. GSS weight WTSS applied. Significance levels: ‡ 0.10; * 0.05; ** 0.01; *** 0.001. Significant coefficients in bold.

5. Results

5.1. Evangelical Protestant Support for Space Exploration Compared with Non-Evangelical Support

A difference of means test finds that Evangelicals are significantly less knowledgeable, less interested, and less supportive of space spending than others when all samples are combined for 2004–2018 GSS surveys (not shown). Table 3 breaks this finding down by three subsets of GSS years divided between the three presidencies of Bush, Obama, and Trump. All Evangelical means are significantly different than non-Evangelical means for all variables and all periods with the one exception of space interest during the Bush administration. Every Evangelical mean is numerically lower than the non-Evangelical mean for every variable and period. This finding holds if non-white Evangelicals are excluded from the Evangelical tradition (not shown).

5.2. Evangelical Protestant Support for Space Exploration during the Trump Presidency Compared with Evangelical Support Prior to the Trump Presidency

The means contained in Table 3 can also be used to examine Question 2. Over time, space knowledge has decreased for Evangelicals and non-Evangelicals alike, while space interest and funding support are on upward trajectories for both categories. Deeper analysis of the responses will allow a better evaluation of Evangelical trends in comparison with broader trends.

Table 4 compares the categories of space interest across the three administrations for the full GSS sample and for Evangelicals specifically. Again, the proportions for Evangelicals are lower in the supportive categories. When compared to the broader population, Evangelicals in 2018 are 7.7 points below all respondents in the “very interested” category and 2.9 points lower in the “moderately interested” category. Alternatively, Evangelicals have a 10-point advantage in the “not at all interested”

group. While this disinterested contingent has remained constant at 38% for both the Obama and Trump eras, there has been some change during the Trump presidency in the other two categories. Notably, the “very interested” group increased by nearly five points, drawn from the “moderately interested” camp. The highest level of interest also increased society-wide, but only by two points. In other terms, the proportion that is “very interested” went up by about 30% for Evangelicals but only 8% for everyone.

If support is instead measured by the percent of “very” and “moderately” interested combined (vs. “not at all” interested), then Evangelical interest is flat at around 62% over the two presidencies. On the whole, GSS respondents increased by one point in this combined measure to just over 72%.

Table 5 replicates this proportional comparison for the space funding categories. This data summary again supports the general increase in space policy support over the three 21st century presidencies. The division between those who want to increase/maintain funding versus those who want to decrease funding has evolved favorably, in the direction of support, from Bush to Trump: 63–37, 71–29, and now 77–23. This trend is also evident for Evangelicals: 55–45, 62–38, and 68–32. Evangelicals consistently lag behind, but have steadily become more supportive of space spending.

Nonetheless, the percentage of Evangelicals favoring increased funding has remained flat at just over 17% under Obama and Trump. The percentage of Evangelicals favoring current funding levels instead increased by over six points. When combined, the proportion of Evangelicals in [Whitman Cobb’s \(2011\)](#) “issue public” for space exploration increased by 6.1 points in 2018, over the 2010–2016 level, compared with a 5.2-point increase for everyone. Conversely, the rate of Evangelicals in the camp favoring funding cuts decreased by a corresponding 6.1 points. Evangelicals are 36% more likely to be represented in this least supportive category in 2018 when compared with the full population.

Table 6 extends this analysis of support for funding by constructing Binary Logistic Regression Models (BLRM) of funding support for Evangelicals and non-Evangelicals, estimated separately, using all respondent data from 2004 to 2018. The dependent variable is 1/0—1 if the respondent favors increasing or maintaining space funding and 0 if the respondent favors decreasing space funding. The key independent variable is a dummy of whether the case is a 2018 GSS respondent during the Trump presidency. The base models (1 and 3) feature socio-demographic, political, and religious control variables to assess whether any net significant effect of the 2018 dummy remains. Models 2 and 4 additionally add space interest and space science knowledge to the right-hand side of the equation.

All models exhibit significant Chi-Square statistics (0.001 level). The Evangelical and non-Evangelical models are equally matched at predicting the outcome of support for increasing/maintaining spending—given the equivalent Pseudo R-squares of 0.08 (models 1 and 3) and 0.25 (models 2 and 4). Most predictors’ effects on the odds are the same in direction and significance with a few differences between the models in each matched set (1/3, 2/4).

As hypothesized, the effect of the 2018 Trump era dummy variable is positive and significant across all Evangelical models—even when other potentially important factors are controlled for in the model. However, it is also positive and significant across all non-Evangelical models, which also control for other factors. Thus, a potential Trump–Pence effect is not limited to the target religious tradition but is, rather, documented society-wide. The effect is greater in the non-Evangelical Model 3 than in Evangelical Model 1, but lower in the more-developed non-Evangelical Model 4 than in the more-developed Evangelical Model 2. Thus, when controlling for other factors including the antecedents of space policy opinions, the effect of the 2018 dummy variable on the odds of support is greater for Evangelicals than non-Evangelicals.

The coefficients of a logistic regression such as BLRM are more difficult to interpret than the coefficients of linear regression because they are in log-odds units. These logit coefficients can be converted to probabilities to make them more understandable. Given that the emphasis of this current analysis is the effect of the 2018 variable, probabilities are calculated twice for each category of Evangelicals and non-Evangelicals by inserting, alternatively, a 1 or 0 value for this variable into the regression equation. All other variables are held at their mean value (calculated separately for

each group for the same cases included in the regression model following listwise deletion of cases). Coefficients are taken from Models 2 and 4. The calculated probability that an Evangelical prior to 2018 (2004–2016) supported the same or more space funding is 0.636, whereas the probability for Evangelicals in 2018 is 0.714—an increase of nearly eight points or 12.31%. Alternatively, the probability that a non-Evangelical supported the same or more space funding is 0.729 prior to 2018 (2004–2016) and 0.784 in 2018—an increase of 5.5 points or 7.57%. These probabilities are all well above 0.5, denoting that a majority of Evangelicals do support space exploration despite the tradition as a whole consistently demonstrating lower levels of support than non-Evangelicals, other traditions, and society.

While not the focus of this study, the directions on the various control variables are interesting. The male effect is generally positive, but becomes negative (and no longer significant for Evangelicals) when space interest and knowledge are accounted for in the model. Because non-white, born again Protestants were maintained in the Evangelical tradition (versus being relegated to ethnic categories as some analysts recommend; see (Smidt et al. 2009b)), a negative effect emerges for black and Hispanic respondents. These statistically significant effects are negated in the Evangelical model when space interest and knowledge are added. However, the non-Evangelical Model 4 maintains a diminished but sizable significant effect for black respondents. The generational controls suggest that baby boomers have lower odds of supporting space, but the findings become less clear when interest and knowledge are added. Education and income are positive and significant across the board in all models. Standardized coefficients (betas) calculated from a Linear Probability Model (LPM; not shown) show that education exerts twice the effect of income and is the second strongest predictor in the models. When it comes to politics, ideology and party independence do not seem to matter across the board. Identification with the Republican Party, however, has a consistent significant, positive influence on support—and the GOP effect is strengthened when interest and knowledge are added to the models. Church attendance is a negative predictor for Evangelicals, but is not significant in the non-Evangelical models. Finally, space interest greatly enhances the predictive power of Models 2 and 4 (tripling the pseudo R-square) and exerting the strongest effect on the odds (LPM beta for interest is the strongest at 0.36 for both models)—while greatly decreasing the analytical sample because interest and the knowledge questions are asked of subsets of respondents. The space knowledge score is positive but not significant at a conventional 0.05 level for either subgroup.

6. Discussion and Implications

The Trump administration, through the words of space spokesperson Vice President Pence, used religious language to sell the purpose of space exploration throughout 2017–2018 (Koren 2018a). This study attempts to evaluate whether or not this rhetoric, and the overall prominent place of space exploration on the administration's agenda, has elicited greater support for space among some of Trump–Pence's greatest allies—Evangelical Protestants. Past research has found that Evangelicals are the least supportive of space exploration among the prominent religious traditions in the U.S. (Ambrosius 2015). While it would be desirable to directly measure an impact of Pence's messages on Evangelicals, as the social networking approach to religion and politics would prefer, this study takes an indirect approach by looking for significant differences in Evangelical space attitudes after at least one year with Trump as commander-in-chief.

The evidence uncovered by this study, particularly the multivariate model, supports the claim that while the attentive public for space exploration among Evangelicals continues to lag behind non-Evangelicals (support for H1), Evangelicals in 2018 experienced greater gains over the rate of non-Evangelicals (possible support for H2, with the exception of space knowledge, which has declined). These findings may back the assertion that the Trump–Pence space initiatives and supportive religious rhetoric are producing results among Evangelicals; however, given the indirect measurement of any effects, we must be cautious in interpreting the findings. It is possible that the modest gains in support among Evangelicals are due to something not measured by this study at all. It is admittedly unlikely that Pence's faith-based language was publicized widely when excerpts were printed or cut

for use on cable news networks. Therefore, it is most likely that the modest gains in Evangelicals' support for space—relative to the slightly lower gains among non-Evangelicals—is attributable to support for space exploration by an allied administration rather than a result of specific speeches with religious references.

The across-the-board increases in space support by Evangelicals *and* non-Evangelicals are likely related to the general prominence of news reports about Space Corps/Force and private sector space actors (e.g., SpaceX, Blue Origin, and Virgin Galactic) and their charismatic leaders (e.g., Elon Musk, Jeff Bezos, and Richard Branson) during the early part of the Trump presidency. Framing space exploration as a *military* or *economic growth* issue (versus a *science* issue) and the shift to greater private sector implementation of space policy may be welcome developments to conservative Evangelicals, perhaps leading to greater interest and support (even if most private activity is still funded by government). The drop in basic space science knowledge may be a product of growing distrust in science and experts. For Evangelicals and other religious conservatives, it is likely due to hesitance to endorse one of the scientific “facts” included in the quiz score—the big bang theory (which may or may not be seen as compatible with Evangelical views of universal and human origins).

Much has occurred between the collection of the 2018 GSS and the writing of this paper—including the official creation of the Space Force as the newest military branch and the May 2020 launch of American astronauts from American soil (*Launch America* in partnership with SpaceX) for the first time since the retirement of the space shuttles in 2011. Further research should use the 2020 GSS, once released, to gauge attitudes further into the Trump age. Additionally, researchers should find ways to improve upon these exploratory findings by directly measuring the impacts of religious rhetoric in service of space exploration.

Interestingly, Weibel (2020) identifies religious themes in the marketing campaign of Space Force. She quotes the May 2020 recruitment video as suggesting, “Maybe you weren’t put here just to ask the questions. Maybe you were put here to be the answer. Maybe your purpose on this planet isn’t on this planet.” Weibel connects “the idea that the listener was ‘put’ here” to the act of a “higher power,” and the use of the term “purpose” to Christianity’s emphasis on “God’s purpose” for humanity. She concludes by making hypotheses that could be investigated by future work similar to this present study:

Because of this [mistrust of science], making explicit connections between science and space exploration may be problematic at the current time. Associating space with the military is one way to downplay the scientific aspects. Military technology, for instance, is rarely seen as having a liberal bias. Another way to reduce this problematic association is to link space with religion. When we think about the early days of the American space program and the way that American religious practice was contrasted with the atheism of the Soviet Union, it is easy to see why tying religious language and imagery with the United States Space Force is the approach being taken in this recruitment video. New Space Force recruits aren’t being asked to be academic elites or rocket scientists, they’re being asked instead to fulfill a celestial destiny. (Weibel 2020)

Future research should directly test Weibel’s hypotheses to examine what types of arguments in favor of space exploration—scientific, religious/spiritual, military/defense, or something else—are most effective at encouraging support among the mass public and specific religious communities. Evangelicals in particular may be more receptive to religious language and also connections between space and strong national defense, as opposed to purely scientific justifications. After all, Vice President Pence’s space speeches did not only include spiritual allusions but also strong claims for a reinvigorated space policy in response to Chinese challenges to U.S. space and military hegemony (Pence 2018b).

Supplementary Materials: The General Social Survey cumulative data set (1972–2018) is available for download at: <https://gss.norc.berkeley.edu/get-the-data>. Syntax for recoding the space exploration variables is in Appendix A.

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Appendix A

This appendix contains the original question wording of the General Social Survey (GSS) questions related to space exploration. All other questions may be found in the GSS Codebook, which accompanies the online data set. Non-response coding and some transitional language between questions has been removed for brevity. SPSS syntax for recoding these variables is included below each question.

“I would like to talk with you about some things people think about today. We are faced with many problems in this country, none of which can be solved easily or inexpensively. I’m going to name some of these problems, and for each one I’d like you to tell me whether you think we’re spending too much money on it, too little money, or about the right amount.”

“The space exploration program: are we spending too much, too little, or about the right amount on the space exploration program?” (*natspac*)

OR

“Space exploration: are we spending too much, too little, or about the right amount on space exploration?” (*natspacy*)

- (1) Too much
- (2) Too little
- (3) About right

Recode *natspac* (1 = 3) (2 = 2) (3 = 1) (0 = SYSMIS) (8 = SYSMIS) (9 = SYSMIS) into *natspac2*.

Variable labels *natspac2* ‘Support for spending on the space exploration program’.

Value labels *natspac2* 1 ‘spending too much’ 2 ‘spending just right amount’ 3 ‘spending too little’.

Recode *natspacy* (1 = 3) (2 = 2) (3 = 1) (0 = SYSMIS) (8 = SYSMIS) (9 = SYSMIS) into *natspacy2*.

Variable labels *natspacy2* ‘Support for spending on space exploration’.

Value labels *natspacy2* 1 ‘spending too much’ 2 ‘spending just right amount’ 3 ‘spending too little’.

Compute *natspac_y2* = *natspac2*.

Variable labels *natspac_y2* ‘Combined variable on support for space exploration/...program’.

Value labels *natspac_y2* 1 ‘spending too much’ 2 ‘spending just right amount’ 3 ‘spending too little’.

IF (*natspacy2* = 1) *natspac_y2* = 1.

IF (*natspacy2* = 2) *natspac_y2* = 2.

IF (*natspacy2* = 3) *natspac_y2* = 3.

Recode *natspac_y2* (1 = 0) (2 = 1) (3 = 1) into *sameORMore*.

Variable labels *sameORMore* ‘Spending same OR spending more dummy variable’.

Value labels *sameORMore* 1 ‘Spend same/more’ 0 ‘Spend less’.

EXECUTE.

“There are a lot of issues in the news, and it is hard to keep up with every area. I’m going to read you a short list of issues, and for each one—as I read it—I would like you to tell me if you are very interested, moderately interested, or not at all interested.”

“Issues about space exploration: are you very interested, moderately interested, or not at all interested?” (*intspace*)

- (1) Very interested
- (2) Moderately interested
- (3) Not at all interested

Recode intspace (1 = 3) (2 = 2) (3 = 1) (8 = SYSMIS) (9 = SYSMIS) into intspace2.

Variable labels intspace2 'Interest in space exploration'.

Value labels intspace2 1 'not at all' 2 'moderately interested' 3 'very interested'.

EXECUTE.

"The universe began with a huge explosion. Is that true or false?" (*bigbang*)

- (1) True
- (2) False

"Now, does the Earth go around the Sun, or does the Sun go around the Earth?" (*earthsun*)

- (1) (Earth around sun
- (2) Sun around earth

"How long does it take for the Earth to go around the Sun: one day, one month, or one year?" (*solarrev*)

- (1) One day
- (2) One month
- (3) One year

Recode bigbang (1 = 1) (0 = SYSMIS) (2 = 0) (8 = 0) (9 = 0) into bigbang2.

Recode solarrev (3 = 1) (0 = SYSMIS) (1 = 0) (2 = 0) (4 = 0) (8 = 0) (9 = 0) into solarrev2.

Recode earthsun (1 = 1) (0 = SYSMIS) (2 = 0) (8 = 0) (9 = 0) into earthsun2.

Compute spaceknow = sum(bigbang2,solarrev2,earthsun2).

Variable labels spaceknow 'Scientific knowledge score of three space-related questions'.

Value labels spaceknow 1 '1 of 3 space questions correct' 2 '2 of 3 space questions correct' 3 '3 of 3 space questions correct'.

EXECUTE.

Appendix B

This appendix presents evidence to support the decision to combine together *natspac* and *natspacy* into a single variable to be used as a dependent variable in assessing the research questions. As described in Appendix A, the question wording differs slightly. The first, *natspac*, asks about spending on "the space exploration program." The second, *natspacy*, asks about spending on "space exploration" in a more general sense. The GSS includes two versions for a variety of spending questions to examine the impact of question wording. In this case, the subtle insertion of the bureaucratic term "program" may bias some respondents against expressing support.

For the full sample, combining all GSS respondents since 2004, the respective percentages responding to *natspac/natspacy* are as follows: too much (32.7/34.9), right amount (48.3/45.6), and too little (19.0/19.5). For some reason, when dropping "program," about 2% of respondents shift from right amount to too much—the opposite of the expected direction discussed above. For Evangelical respondents from 2004 onward, the same ~2% shift occurs: too much (38.6/40.7), right amount (46.1/44.3), and too little (15.2/14.9). Otherwise, the proportions are very similar for Evangelicals and non-Evangelicals alike.

About this overall difference, [Whitman Cobb \(2020\)](#) writes, “What is interesting is that space exploration as an ideal would seem to attract more people to it and yet the GSS responses show quite the opposite. Overall, more people were willing to spend more on space exploration program compared to space exploration.” Because Whitman Cobb studies differences between regions, and the frequencies of the response categories vary by region, she decides to analyze *natspac* and *natspacy* separately.

Given the slight difference in wording, a Chow test comparing regression coefficients indicates whether the two samples belong together or are in fact too different ([Chow 1960](#)). If respondents can be divided into two distinct samples, one can write:

$$\begin{aligned}y &= X\beta_1 + \varepsilon; \\y &= X\beta_2 + \varepsilon,\end{aligned}$$

where y is the dependent variable, X is a vector of independent variables, ε is the error term, and β_1 and β_2 are parameters to be estimated for each subsample. The null hypothesis to test is:

$$H_0: \beta_1 = \beta_2$$

The Chow test statistic is calculated as follows:

$$F = \frac{[ESS_c - (ESS_1 + ESS_2)]/k}{(ESS_1 + ESS_2)/(n - 2k)},$$

where F is the test statistic, ESS_c is the error (residual) sum of squares for the combined model, ESS_1 is the error sum of squares for the first subsample, ESS_2 is the error sum of squares for the second subsample, k is the number of estimated parameters, and n is the total sample size. The resulting test statistic is distributed $F(k, n - 2k)$.

If one rejects the null hypothesis of equal coefficients, then the two samples are distinct and cannot be combined. If one does not reject the null, the responses are similar enough to combine the sample into one for regression analysis predicting the combined variable. Because the Chow test works for linear and not logistic regression models, a multiple linear regression is estimated alternating between three dependent variables: *natspac*, *natspacy*, and the combined measure. The resulting F statistic for the full sample is 1.51(15, 5425) with a p-value of 0.0923. For the Evangelical subsample, F is 1.43 (15, 1616) with significance of 0.1251. Thus, these F statistics do not reach the critical value for a significance of 0.05. Because one cannot reject the null, responses are considered similar enough to be combined for regression analysis.

This Chow test application is not ideal in this situation, given the ordinal nature of the dependent variable used by the linear regression—and the binary recode of the dependent variable used for this paper’s logistic regression. Nonetheless, it does provide some quantitative evidence that these two variables with slight wording differences do “hang together” enough from 2004 to 2018 to be combined for analysis (when considering both the full sample and the Evangelical subsample).

Another way to look for question effects is to create a dummy variable for those asked the second version of the question (*natspacy*, which asked about “space exploration”) versus the original version (*natspac*, which asked about “the space exploration program”). This allows one to test for significant differences in the means for the two groups. The means of the two groups for the full sample (2004–2018) and for Evangelicals (same period) specifically, on the 3-point scale, are not significantly different. For all respondents, the means are 1.8634 (*natspac*) and 1.8467 (*natspacy*). The t -test significance is 0.115. For Evangelicals only, the means are 1.7663 (*natspac*) and 1.7419 (*natspacy*). The t -test significance is 0.216. In both cases, the null of mean differences cannot be rejected.

Given the similar distributions and the failure to reject the null in both the Chow (F) and difference of means (t) tests, the decision was made to combine these variables in parts of the analysis (see [Table 3](#), [Table 5](#), and [Table 6](#)). [Table 3](#) does report findings for the two separate and one combined measure.

This decision will not apply to all studies of the GSS space spending questions outside of the time period and independent variables (Evangelicalism and the Trump era) analyzed here.

References

- Ambrosius, Joshua D. 2011. Religion, politics, and polity replication: Religious differences in preferences for institutional design. *Interdisciplinary Journal of Research on Religion* 7: 1–35.
- Ambrosius, Joshua D. 2015. Separation of church and space: Religious influences on public support for U.S. space exploration policy. *Space Policy* 32: 17–31. [CrossRef]
- Ambrosius, Joshua D. 2016. Our cosmic future? How religion might shape it. In *Touching the Face of the Cosmos: On the Intersection of Space Travel and Religion*. Edited by Paul Levinson and Michael Waltemathe. New York: Fordham University Press, pp. 20–32.
- Bush, George W. 2004. Transcript: President Bush Delivers Remarks of U.S. Space Policy. In *NASA Facts*; January 14. Available online: https://www.nasa.gov/pdf/54868main_bush_trans.pdf (accessed on 11 October 2020).
- Chow, Gregory C. 1960. Tests of equality between sets of coefficients in two linear regressions. *Econometrica* 28: 591–605. [CrossRef]
- Coppins, McKay. 2018. God’s Plan for Mike Pence. *The Atlantic*. January–February. Available online: <https://www.theatlantic.com/magazine/archive/2018/01/gods-plan-for-mike-pence/546569/> (accessed on 11 October 2020).
- Djupe, Paul A., and Brian R. Calfano. 2014. *God Talk: Experimenting with the Religious Causes of Public Opinion*. Philadelphia: Temple University Press.
- Faulkner, Danny R. 2014. Should Christians explore space? *Answers in Genesis Blog*. December 17. Available online: <https://answersingenesis.org/blogs/danny-faulkner/2014/12/17/should-christians-explore-space/> (accessed on 11 October 2020).
- Galli, Mark. 2019. Trump should be removed from office. *Christianity Today*. December 19. Available online: <https://www.christianitytoday.com/ct/2019/december-web-only/trump-should-be-removed-from-office.html> (accessed on 11 October 2020).
- Hunter, James Davison. 1991. *Culture Wars: The Struggle to Define America*. New York: Basic Books.
- Koren, Marina. 2018a. Mike Pence’s outer-space gospel. *The Atlantic*. August 23. Available online: <https://www.theatlantic.com/science/archive/2018/08/mike-pence-nasa-faith-religion/568255> (accessed on 7 October 2020).
- Koren, Marina. 2018b. What does Trump mean by ‘Space Force’? *The Atlantic*. March 13. Available online: <https://www.theatlantic.com/science/archive/2018/03/trump-space-force-nasa/555560/> (accessed on 11 October 2020).
- Launius, Roger D. 2003. Public opinion polls and perceptions of US human spaceflight. *Space Policy* 19: 163–75. [CrossRef]
- Malik, Tariq. 2017. President Trump’s ‘Mysteries of Space’ Joins Inaugural Speech Tradition. *Space.com*. January 20. Available online: <https://www.space.com/35404-president-trump-space-inauguration-speech-history.html> (accessed on 11 October 2020).
- Martínez, Jessica, and Gregory A. Smith. 2016. How the Faithful Voted: A Preliminary 2016 Analysis. *Pew Research Center FACTANK*. November 9. Available online: <https://www.pewresearch.org/fact-tank/2016/11/09/how-the-faithful-voted-a-preliminary-2016-analysis/> (accessed on 11 October 2020).
- Nadeau, François. 2013. Explaining public support for space exploration funding in America: A multivariate analysis. *Acta Astronautica* 86: 158–66. [CrossRef]
- Pence, Mike. 2017. Remarks by the Vice President at a Meeting of the National Space Council. In *White House Remarks*; October 5. Available online: <https://www.whitehouse.gov/briefings-statements/remarks-vice-president-meeting-national-space-council/> (accessed on 10 October 2020).
- Pence, Mike. 2018a. Remarks by Vice President Pence at the 34th Space Symposium, Colorado Spring, CO. In *White House Remarks*; April 16. Available online: <https://www.whitehouse.gov/briefings-statements/remarks-vice-president-pence-34th-space-symposium-colorado-springs-co/> (accessed on 10 October 2020).
- Pence, Mike. 2018b. Remarks by Vice President Pence on the Future of the U.S. Military in Space. In *White House Remarks*; August 9. Available online: <https://www.whitehouse.gov/briefings-statements/remarks-vice-president-pence-future-u-s-military-space/> (accessed on 10 October 2020).

- Pomeroy, Caleb. 2019. The quantitative analysis of space policy: A review of current methods and future directions. *Space Policy* 48: 14–29. [CrossRef]
- Roy, Stephanie A., Elaine C. Gresham, and Carissa Bryce Christensen. 2000. The complex fabric of public opinion on space. *Acta Astronautica* 47: 665–75. [CrossRef]
- Silliman, Daniel. 2020. 5 Ways Mike Pence Has Shaped the Trump Administration. *Christianity Today*. October 7. Available online: <https://www.christianitytoday.com/news/2020/october/mike-pence-vp-debate-5-things.html> (accessed on 11 October 2020).
- Smidt, Corwin E. 2019. Measuring religion in terms of belonging, beliefs, and behavior. In *Oxford Research Encyclopedia of Politics: Political Values, Beliefs, and Ideologies*. New York: Oxford University Press, Available online: <https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-675> (accessed on 30 October 2020).
- Smidt, Corwin E., Kevin R. den Dulk, Bryan T. Froehle, James M. Penning, Stephen V. Monsma, and Douglas L. Koopman. 2010. *The Disappearing God Gap? Religion in the 2008 Presidential Election*. New York: Oxford University Press.
- Smidt, Corwin E., Lyman A. Kellstedt, and James L. Guth, eds. 2009a. *The Oxford Handbook of Religion and American Politics*. New York: Oxford University Press.
- Smidt, Corwin E., Lyman A. Kellstedt, and James L. Guth. 2009b. The role of religion in American politics: Explanatory theories and associated analytical and measurement issues. In *The Oxford Handbook of Religion and American Politics*. Edited by Corwin E. Smidt, Lyman A. Kellstedt and James L. Guth. New York: Oxford University Press, pp. 3–42.
- Wang, Jen Rae. 2017. New Space Policy Directive Calls for Human Expansion across Solar System (Release 17-097). In *NASA Press Releases*; December 11. Available online: <https://www.nasa.gov/press-release/new-space-policy-directive-calls-for-human-expansion-across-solar-system> (accessed on 11 October 2020).
- Weibel, Deana L. 2020. “Maybe You Were Put Here to Be the Answer”: Religious Overtones in the New SPACE Force Recruitment Video. *The Space Review*. Available online: <https://www.thespacereview.com/article/3942/1> (accessed on 10 October 2020).
- Whitman Cobb, Wendy N. 2011. Who’s supporting space activities? An ‘issue public’ for US space policy. *Space Policy* 27: 234–9.
- Whitman Cobb, Wendy N. 2020. The South and NASA: Public opinion differences and political consequence. *Astropolitics* 18: 122–43. [CrossRef]
- Wuthnow, Robert. 1988. *The Restructuring of American Religion*. Princeton: Princeton University Press.

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