

The Peters ETI Religious Crisis Survey

Ted Peters, Principal Investigator

Professor of Systematic Theology
Pacific Lutheran Theological Seminary [Institute for Theology and Ethics]
and the Center for Theology and the Natural Sciences
at the Graduate Theological Union, Berkeley CA

Julie Froehlig, Research Assistant

Science Teacher, St. John's School, San Francisco CA

Abstract: The Peters ETI Religious Crisis Survey was constructed to test the following hypothesis: upon confirmation of contact between earth and an extraterrestrial civilization of intelligent beings, the long established religious traditions of earth would confront a crisis of belief and perhaps even collapse. Responses from individuals self-identifying with seven religious traditions—Roman Catholicism, mainline Protestantism, evangelical Protestantism, Orthodox Christianity, Mormonism, Judaism, and Buddhism—indicate widespread acceptance of the existence of ETI and incorporation of ETI into their existing belief systems. Religious persons, for the most part, do not fear contact. Forecasts regarding imminent collapse of earth's religious belief systems were found to be more prevalent among non-religious respondents than among religious respondents. This survey provides evidence that tends to disconfirm the hypothesis.

Contents

1. Background
 - 1.1. The Scientific Warrant for this Survey
 - 1.2. Previous Relevant Surveys
2. Method
 - 2.1. Survey Design
 - 2.2. Subject Recruitment
3. Results and Discussion
 - 3.1 Analysis of Responses to Questions 3-5
 - 3.2 Analysis of Responses to Questions 6-10
4. Conclusion
5. Sources Cited
6. Appendices [Questionnaires; numerical data; pie charts; respondent comments]

1. Background

1.1. The Scientific Warrant for this Survey

The *Focal Research Question* of this survey research project is the following: *Would either the Christian religion or selected non-Christian religions confront a crisis or even collapse when confronted with confirmation that extraterrestrial intelligent life (ETIL) exists?* This question is important because of a widespread assumption found frequently articulated by SETI (Search for Extraterrestrial Intelligence) scientists and other astrobiologists, namely, that the terrestrial religious traditions with which we are familiar are subject to collapse in the face of new knowledge regarding extraterrestrials. This assumption requires confirmation or disconfirmation. The Peters ETI survey of religious leaders has provided relevant data for constructing a reliable expectation.

The director of the Center for SETI Research in Mountain View, California, Jill Tarter, articulates the assumption that warrants further investigation. Dr. Tarter predicts confirmation of ETIL would be devastating to terrestrial theology. The god of terrestrial religion is our own invention, Tarter contends. It is possible to evolve and grow and get beyond our inherited belief in God. Although to date no contact of any sort with extraterrestrial intelligent life has occurred, Tarter can imagine myriads of planets teeming with living beings. All will have evolved. And, if some ETI began their evolutionary development earlier than we on earth, their technology will have progressed further. She also imagines that these extraterrestrial societies will have achieved a high degree of social harmony so as to support this advanced technology. And, in addition, if ETIs have developed their own religion, it too will be more advanced than the religions we have on earth. Or, more likely, the “long-lived extraterrestrials either never had, or have outgrown, organized religion” (Tarter, 146). We can forecast, then, that contact between earth and ETIL will necessitate the end of our inherited religious traditions and the incorporation of a more universal worldview.

Let us try to retrace the path of SETI reasoning that leads to such a postulate. SETI is selective. SETI is listening to the skies in hopes of hearing a signal emitted from an extraterrestrial intelligent source. Non-intelligent or less intelligent beings may live elsewhere in the universe, to be sure; but the only ones likely to be sending signals are those with advanced technology. SETI does not make judgments about ETIL in general, but focuses rather on those intelligent beings capable of sending radio signals. To be sophisticated enough to devise a signal emitting technology, an extraterrestrial civilization must have been evolving for a long time. We here on earth developed radio only a century or so ago; so if we are to make contact with ETI they must be at least as old as we earthlings and perhaps even older. The statistical possibilities for long evolving societies in a universe that is 13.7 billion years old are myriad; so ETI most likely exist even if the distances are too great to be traveling from their home to ours. Here is the logic that leads to a religious judgment: with increase in evolutionary age comes an increase in technology; with increase in technology comes social changes appropriate to sustaining such a technology, perhaps even a social peacefulness that provides the stability to sustain such a technology for thousands or millions of years. Benevolence would become a necessary ingredient among such beings in order to prevent annihilating themselves. The disposition toward benevolence

accompanies a lengthy evolutionary history and the development of advanced technology. Insofar as earth's religious groups are prone to competition and even violence toward one another, SETI speculators can reasonably imagine that the ETI who make contact as post-religious or supra-religious. All this leads to the prospect that contact with a more advanced ETI civilization would create a crisis, perhaps even a collapse, for our existing religious belief systems on earth.

We find this train of reasoning in the work of Arizona State University physicist and astrobiologist Paul Davies. Davies suggests that ETI will be too smart to believe what earthlings believe. If ETI visit us, their superior supra-religious beliefs will squash our more primitive biblical beliefs. "It might be the case that aliens had discarded theology and religious practice long ago as primitive superstition and would rapidly convince us to do the same. Alternatively, if they retained a spiritual aspect to their existence, we would have to concede that it was likely to have developed to a degree far ahead of our own. If they practiced anything remotely like a religion, we should surely soon wish to abandon our own and be converted to theirs" (Davies, 37). Michael Michaud concludes, "many scientists believe that more advanced intelligences, if they ever have organized religions, will abandon them" (Michaud, p.206).

With this as background, it seems warranted that actual adherents to the belief systems of earth's religious traditions should be consulted to determine whether they fear that their beliefs are in jeopardy. We tested the following hypothesis: *upon confirmation of contact between earth and an extraterrestrial civilization of intelligent beings, the long established religious traditions of earth would confront a crisis of belief and perhaps even collapse.* The evidence gathered by the Peters ETI Religious Crisis Survey tends to disconfirm this hypothesis.

1.2. Previous Relevant Surveys

Of the previous surveys dealing with similar matters, we found most relevant the work of Victoria Alexander. In 1994 Alexander conducted a survey of U.S. clergy regarding their religious responses to extraterrestrial life. She provided clergy from Protestant, Catholic, and Jewish congregations with a set of questions such as: would you agree that "official confirmation of the discovery of an advanced, technologically superior extraterrestrial civilization would have severe negative effects on the country's moral, social, and religious foundations"? She tabulated her data and concluded: "In sharp contrast to the 'conventional wisdom' that religion would collapse, ministers surveyed do not feel their faith and the faith of their congregation would be threatened" (Alexander, 360). This study provides significant evidence toward disconfirmation of the widespread assumption regarding a religious crisis precipitated by knowledge of ETI. The Alexander study differs from the Peters study on two counts: first, the latter study covers a wider range of religious traditions, both lay and clergy; and, second, the focus of the Alexander survey is on ETI associated with Unidentified Flying Objects whereas the Peters study is prompted by the scientific field of astrobiology.

A second valuable although less directly relevant resource has been the 2000 survey conducted by D.A. Vakoch and Y.-S. Lee, "Reactions to Receipt of a Message from Extraterrestrial Intelligence: A Cross-Cultural Empirical Study" (Vakoch). To conduct this survey of possible reactions to receipt of a message by SETI, Vakoch and Lee designed a set of psychometric scales

to assess six beliefs among Chinese and American undergraduate students: (1) that extraterrestrial life exists; (2) that ETI would be benevolent and that we should respond to a message; (3) that ETI would be malevolent; (4) that message receipt would be unsettling; (5) that message receipt would be religiously significant; and (6) that experts should determine the content of a reply. Among the results the researchers observed we note the following: among “both Americans and Chinese, those who were more religious were less likely to think that extraterrestrial life exists...It seems that those Americans who viewed message receipt as spiritually significant were both more open to life existing beyond earth, and less apprehensive about making contact” (Vakoch, p.743). Although belief in the existence of ETI could be pertinent, disbelief in ETI’s existence (belief in a rare or unique earth) is not in itself a measure of anxiety or fear regarding a crisis of religious belief that could be caused by gaining knowledge of ETI. Vakoch and Lee tested for items related to our focal question, but they did not target precisely the same concern. Although the Vakoch and Lee study does not provide direct support for the Alexander and Peters studies, the results are not inconsistent.

Much to the point, thirdly, is a Roper Poll prepared for the Sci Fi television channel in September 2002, “UFOs & Extraterrestrial Life: American’s Beliefs and Personal Experiences.” Although this poll deals with the UFO phenomenon rather than astrobiology, what it reveals regarding the relationship between religion and extraterrestrial life is pertinent. The relevant question was: would announcement of ETI precipitate a religious crisis? The overwhelming answer was negative. The positive greeting of ETI increased step by step as the sample increased in age. Of those between the ages of 18 and 24, 80% declared that their present religious beliefs would not change at all. This rose to 85% for those 25 to 34; 89% for those 35 to 49; 91% for those 50 to 64; and 93% for those above 65 years of age. Roper concludes: “very few Americans say that an official government announcement about the discovery of intelligent extraterrestrial life would cause them to question their religious beliefs. A full 88 percent say that such an announcement would have no impact on their religious beliefs” (Roper). The Peters ETI Religious Crisis Survey strongly reinforces this Roper conclusion.

2. Method

2.1. Survey Design

Two forms of the single instrument were used in the Peters ETI Religious Crisis Survey: a paper survey circulated primarily at the Graduate Theological Union in Berkeley, California, and an email survey, using SurveyMonkey.com on the web as a tool for distribution and tabulation of results. Both surveys asked the same questions, but an early version of the paper version did not yet have the question directed at non-religious participants (#5 in the final draft). 90 of the respondents completed this version. The final version had a set of ten questions, two of which identified the survey respondents, eight were statements for the respondent to assess.

As mentioned, we benefitted from a previous model, the *Alexander UFO Religious Crisis Survey*. We pursued a similar agenda but with more elaborate and nuanced detail. The Peters survey attempts to confirm or disconfirm Alexander’s key question: “Official confirmation of the discovery of an advanced, technologically superior extraterrestrial civilization would have severe negative effects on the country’s moral, social, and religious foundations.” Our variant subdivides this question into three parts, allowing the respondent to express how confirmation

would affect their personal beliefs (Question 3); the beliefs of their own religious tradition (Question 4) and the beliefs belonging to other world religions (Question 5).

Whereas the Alexander instrument distinguished only three religious categories (Protestants, Catholics, and Jews), the Peters instrument distinguished persons self-identifying with 11 different groups:

- Roman Catholic
- Protestants: mainline
- Protestants: evangelical
- Orthodox Christian
- Mormon
- Jews
- Buddhist
- Hindu
- Muslims
- Non-Religious
- Other.

Crossing our threshold of 35 or more respondents were Protestants: mainline; Protestants: evangelical; Orthodox Christian; Mormon; Jewish; Buddhist; Other; and Non-Religious. The samples of those identifying with Hinduism and Islam were too small, in our judgment, to incorporate into our numerical analysis. Yet, we did pay attention to the comments made by individuals in these categories.

Within the “Other” category some respondents volunteered to identify themselves as unaffiliated theist, mystic, Swedenborgian, Jehovah’s Witness, and one a combination of Jewish and atheist. The traditions or denominations of most self-identified “Other” respondents are unknown. Gained from the respondent comments, those self-identifying as “Non-Religious” apparently included agnostics and atheists along with a variety of different persuasions that stand over and against organized religious communions.

In addition, we asked respondents to select which category of church involvement best applied to them:

- Clergy
- Lay
- Religious (monk, nun...)
- None.

The data for distinguishing these categories is in; but to date we have left this matter unanalyzed. See Appendix 2.

2.2 Subject Recruitment

Surveys were circulated to a number of clergy, religious, and other intellectual leaders as well as lay people from most major religious groups and people who consider them selves to be non-religious.

In phase one we recruited local respondents associated with the Graduate Theological Union (GTU) in Berkeley, California. We asked respondents for leads to other possibly interested parties. In phase two we sent out a mass email using the SurveyMonkey tool on the web, leading to world-wide participation. Email surveys were sent to various pastors, asking them to forward it on to members of their congregation. Many emails were sent out by both the research assistant and Ted Peters to various religious leaders around the globe, lay and non-religious persons, asking them to forward the email on to their colleagues and associates. A web accelerator factor then kicked in, as the survey was spread by independent blogs, such as the *Wired* blog.

The research assistant, Julie Froehlig, made the paper surveys available at GTU seminary dining halls (Pacific School of Religion and Church of the Divinity School of the Pacific) for a total of four meals, offering chocolate and alien suckers as an incentive. She also attended a function at Franciscan School of Theology. Twelve surveys were given to one of the members of a Jesuit House, who was able to get five members of his order to participate. In addition, surveys were made available at a local Lutheran Church coffee hour and in a graduate level course taught by Ted Peters at Pacific Lutheran Theological Seminary. 154 paper surveys were obtained in this way, typically using the candy incentive accompanied by humor to recruit participants.

The research assistant tabulated 154 of the paper surveys and 1171 of the email surveys. We worked with the assumption that a return of more than 35 respondents would be required to establish data sufficiently reliable to support interpretation. When the survey period ended, two groups failed to meet this minimum: Muslims and Hindus. Eight religious categories plus the non-religious category remained sufficiently viable to support further interpretation.

Figure 1

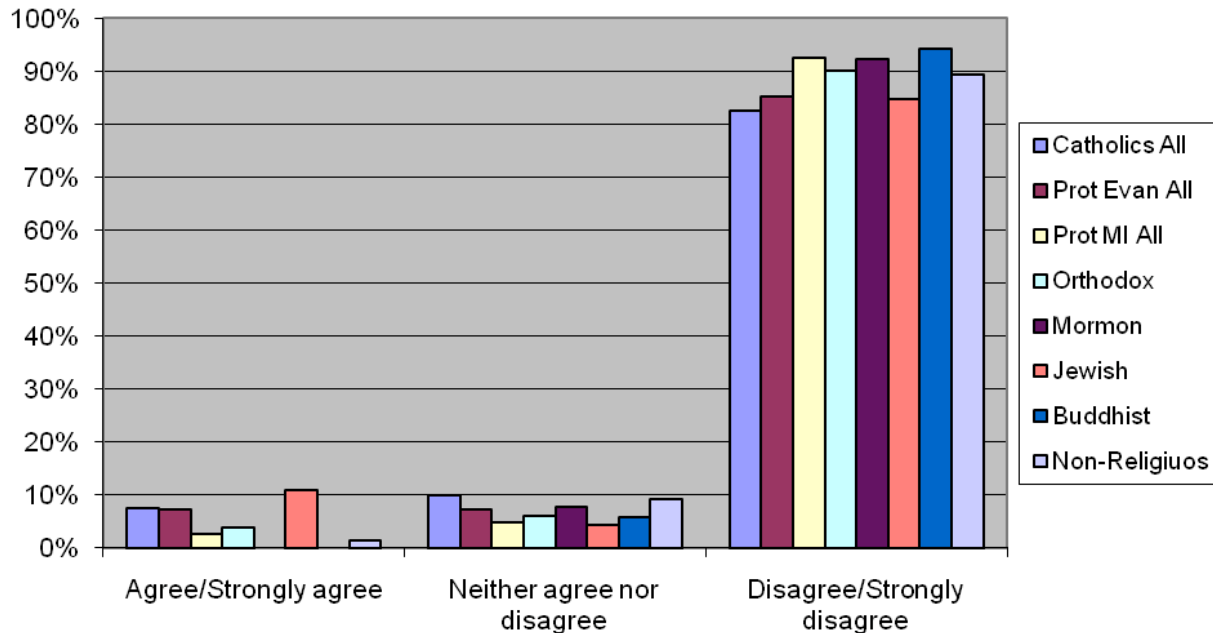
Self-identified Group	Email Response Count	Paper Surveys	Total Respondents
Roman Catholic	111	9	120
Protestants: evangelical	239	6	245
Protestants: mainline	320	113	433
Other	79	10	89
Orthodox Christian	50	0	50
Mormon	38	1	39
Hindu	14	0	14
Jewish	40	6	46
Muslim	14	0	14
Buddhist	70	0	70
Non-religious	196	9	205
Totals	1171	154	1325

2. Results and Discussion

2.1 Analysis of Responses to Questions 3-5

The first two questions of each questionnaire served to identify the respondent. Questions three through ten provide the content. Questions 3, 4, and 5 are of particular interest, because they deal most directly with variants on the focal question.

Q3. Official confirmation of the discovery of a civilization of intelligent beings living on another planet would so undercut my beliefs that my beliefs would face a crisis.



Question 3 asks the respondent to attend to his or her own personal religious beliefs. Significant here is that among those who self-identify as Roman Catholic, mainline Protestant, evangelical Protestant, Orthodox Christian, Mormon, Jew, and Buddhist, the vast majority expect no crisis to develop when learning of ETIL. No evidence of widespread anxiety or fear that their religious belief system might be threatened surfaces here. “Hey,” comments a mainline Protestant respondent, “I’d share a pew with extraterrestrials any day.” If adherents to the world’s religious traditions foresee no threat, then the widespread assumption about an impending crisis fails to gain confirmation here.

The comments accompanying the survey responses indicate that this is the majority view among Christians and non-Christians alike. “Finding ETI, I believe, would be a profound and wonderful event,” commented a mainline Protestant. “From an evangelical Christian perspective,” wrote another respondent, “the Word of God was written for us on Earth to reveal the creator....Why should we repudiate the idea that God may have created other civilizations to bring him glory in

the same way?” One Orthodox Christian commented: “Nothing would make me lose my faith. God can reach them if they exist.”

An evangelical surmised that “there is nothing in Christianity that excludes other intelligent life”, while another argued that “the Bible allows for the possibility of advanced beings who can take on human form—2 Peter 2:4 and Jude 6.”

The place of Jesus Christ and his work of salvation is important to Christians. A Roman Catholic remarks: “I believe that Christ became incarnate (human) in order to redeem humanity and atone for the original sin of Adam and Eve. Could there be a world of extraterrestrials? Maybe. It doesn’t change what Christ did.” Similarly, an evangelical Protestant contends that Christ’s “death and resurrection were universally salvific,” valid for ETI, while another evangelical says, “I believe that the eschatological claim that ‘every knee will bow’ to Jesus as God applies to extraterrestrial intelligent beings (even if they don’t have knees).”

Among the few Muslim respondents, one wrote, “Islamically, we do believe that God created other planets similar to Earth”; and another seemed to concur, “only arrogance and pride would make one think that Allah made this vast universe only for us to observe.” One Buddhist speculated that “ETs would be, essentially, no different from other sentient beings, i.e., they would have Buddha Nature and would be subject to karmic consequences of their actions.” A self-identified mystic trumpets: “my belief in God is absolutely unaffected by extraterrestrial life.” Finally, “discovery of ET would not affect my personal belief system because I am a stone atheist.”

Some of the religious respondents hinted they believe in *contact optimism*—that is, they expect that extraterrestrial intelligent life forms exist and they positively look forward making contact. Others placed themselves with the *rare earth* camp—that is, they believe that life on earth is so rare that a second genesis of life is not likely to have occurred anywhere else in space. The rare earth position does not necessarily make the beliefs of the person who holds it fragile or vulnerable. One evangelical Protestant cheerfully remarked: “I don’t think they are out there. But if they are, that’s cool.”

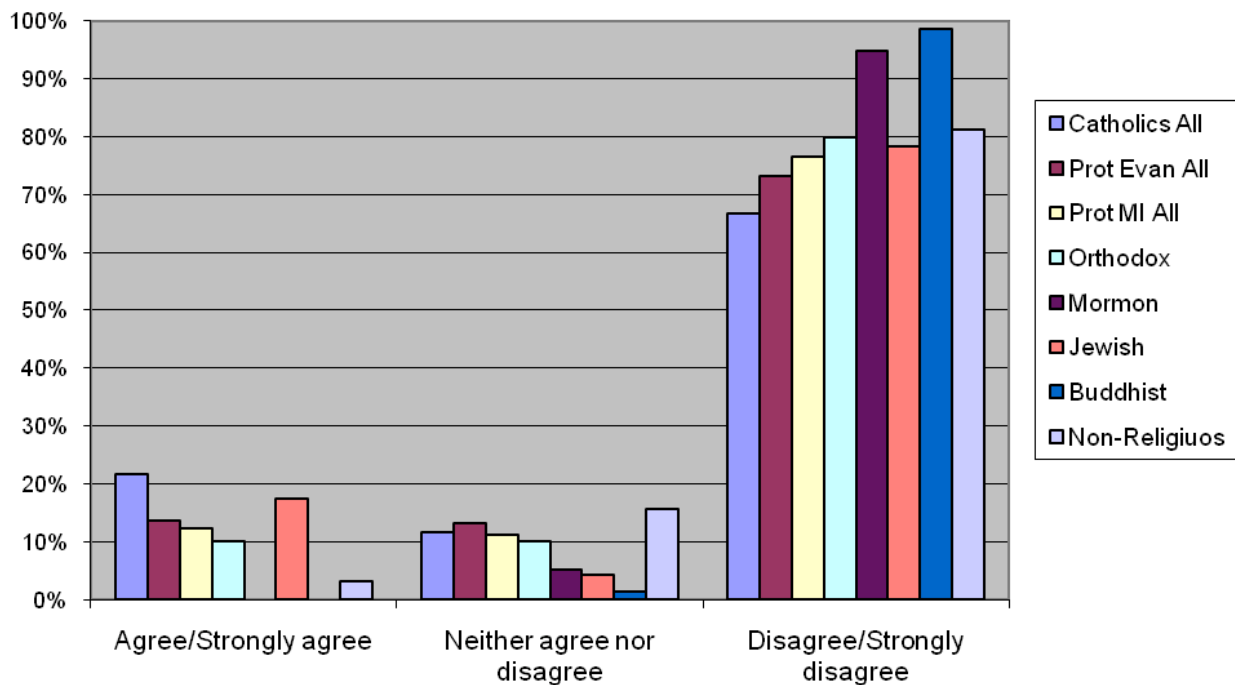
Despite the clear majority who feel comfortable with knowledge of ETI life forms, a minority of individuals perceive a challenge to their religious faith posed by gaining knowledge of ETI. The speculative assertion that “the foundations of my religion (Catholic) and many others may be shaken by such a discovery” appeared among the comments. One evangelical Protestant states, “I personally believe that Satan, the enemy of Jesus, will attempt to deceive the world into believing he is an ET, and many will fall for it....There are no ETs in the sense of physically evolved alien creatures. There are ETs in the sense of spiritual beings (angels and demons).”

A stereotype sometimes surfaces: fundamentalist believers are the most vulnerable to a religious crisis because ETI does not fit the fundamentalist worldview. “Confirmation of alien intelligence might cause a crisis for Protestant fundamentalism and Islam, for which their scriptures’ failure to predict the aliens could be quite damaging,” writes a non-religious respondent.

The Peters survey did not try to ferret out fundamentalism as a separate category. Respondents who belong to the fundamentalist tradition generally locate themselves within the more inclusive evangelical Protestant category. The category of “Protestant: evangelical” includes conservative Christians, some of whom but not all of whom are fundamentalists. The survey data alone do not discriminate. However, some respondents volunteered comments, suggesting that they fit the description of fundamentalists. Of these, a few did voice apprehension about the prospect of ETI communication. “Nothing I can find in scripture altogether rules out extraterrestrial life, but on balance I think it is very unlikely that such a thing exists.”

Within the scope of Christian theology, it appears that little if any beliefs preclude the existence of extraterrestrial beings. Their presence would at most widen the scope of one’s understanding of creation and create some puzzles for how Christians understand the work of salvation (Peters, chapter 3). Jews and Buddhists, it appears, would experience even less friction in their belief systems should confirmation of the existence of ETI be established.

Q4. Official confirmation of the discovery of a civilization of intelligent beings living on another planet would so undercut the beliefs of my particular religious tradition that my religious tradition would face a crisis.



Question 4 shifts from personal beliefs to the beliefs of the religious tradition to which the respondent self-identifies. Can we distinguish slightly between one’s individual belief and the belief he or she shares with tradition? “There is nothing in Christianity that excludes other intelligent life,” commented one evangelical Protestant. Another added: “I honestly don’t think ETI existing has any affect on the Bible and the Christian faith”; whereas still another hinted at doubt: “my personal religious tradition would have trouble if there were ETs who were sinful.” Another evangelical pressed us to prepare for the eventuality: “the religious tradition with which

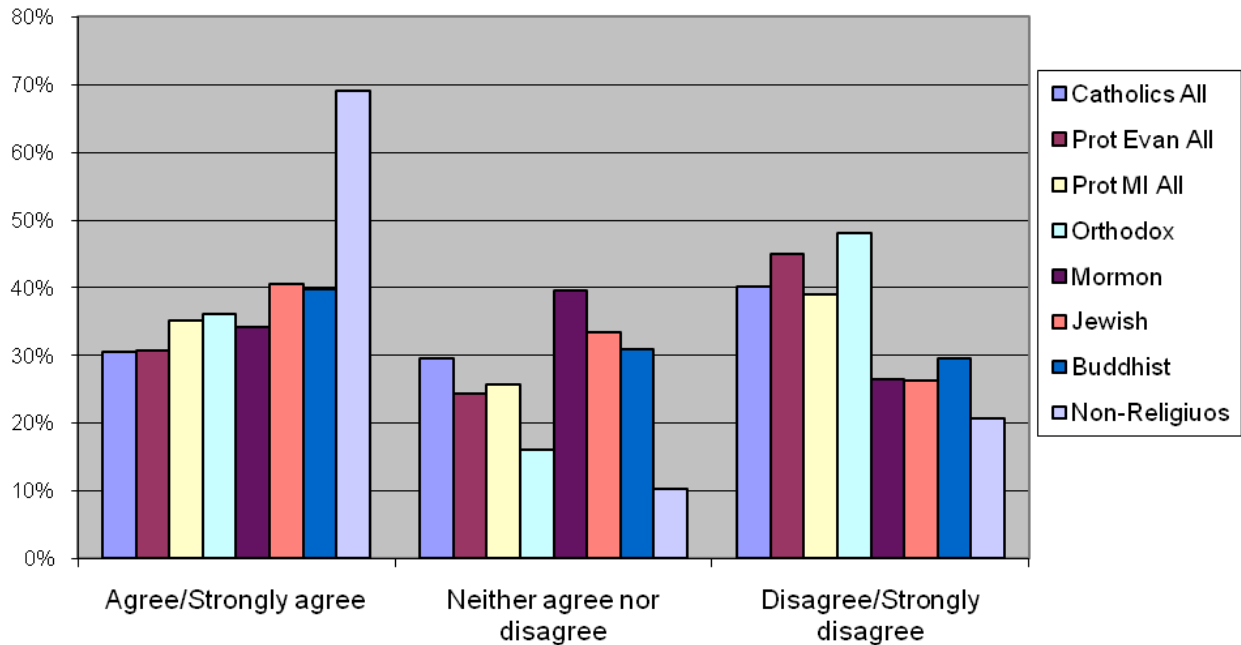
I identify (Protestant Evangelical) is not prepared for the day we do make contact; but we need to start thinking this out and become prepared.”

Responses to Question 4 tell us that very little fear is registered regarding a possible threat to one’s inherited belief system. However, the numbers are not identical to those of Question 3. They drop slightly in the Disagree/Strongly disagree option. Might this indicate a slightly higher level of confidence with one’s own individual beliefs than with the beliefs of the larger religious tradition to which one belongs? Here is what one Buddhist told us: “As a Mahayana Buddhist, with a worldview that includes in scriptures Buddhas and bodhisattvas from many different world systems, such information [news about ETI] would not be shattering theologically, though of course institutions and practices might reverberate.” One respondent offered this: “the strict followers of religion would be the most affected by such a finding of extraterrestrial life whereas the loose followers such as myself would welcome the new discovery.” Might a small number of respondents worry slightly more about others in their tradition than they do about themselves?

This interpretation could be supported by data drawn from another survey. A 2007 survey of more than 35,000 Americans conducted by the Pew Forum on Religion and Public Life uncovered a trend that may be indirectly relevant. Whereas conventional wisdom might suggest that the more religiously zealous a person is the more intolerant he or she would be, this survey indicates that the opposite is true. Zealous Americans are tolerant, even welcoming religious perspectives that differ from their own. To the statement, “many religions can lead to eternal life,” for example, 57 percent of evangelical Protestants agreed as did 79 percent of Roman Catholics. So did the majority of Jews, Hindus, and Buddhists. What this suggests is “a broad trend toward tolerance and an ability among many Americans to hold beliefs that might contradict the doctrines of their professed faiths” (Banerjee). Now, this survey is limited to Americans and it does not test directly for openness toward ETI. However, if it is in fact the case that many religious people are capable of holding “beliefs that might contradict the doctrines of their professed faiths,” then it might follow that those who welcome ETI into their worldview could do so even if they worry slightly about doctrinal fragility in their own respective religious tradition.

Note how high Mormons score. Many Mormon respondents added comments to the effect that belief in ETI is already a part of Mormon doctrine. “My religion (LDS, Mormon) already believes in extra-terrestrials.”

Q5. Even though my religious (or non-religious) viewpoint would remain unaffected, contact with extraterrestrials would so undercut traditional beliefs, that the world's religions would face a crisis.

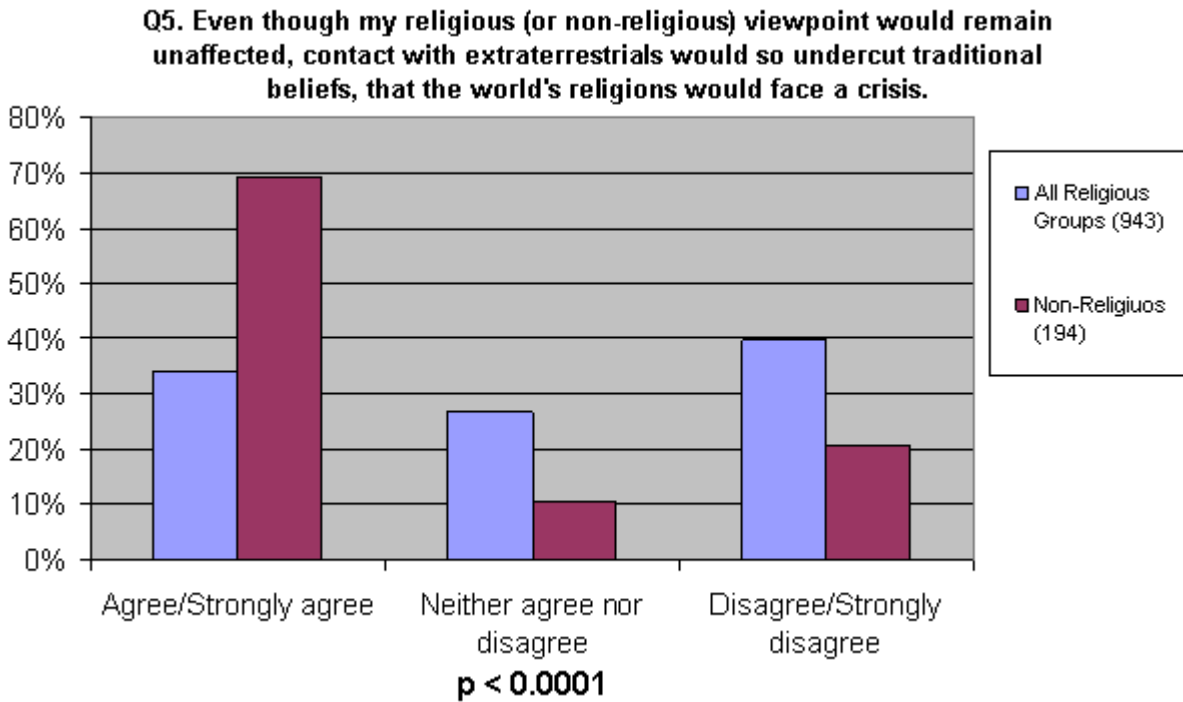


After seeing how firm the Disagree/Strongly disagree position is taken by adherents to the major religious traditions in Questions 3 and 4, the contrast with Question 5 becomes illuminating. A slight majority remain in the Disagree/Strongly disagree category. Yet, the Agree/Strongly agree cluster is significantly higher than in Question 3 and still higher than in 4. Those who identify with a major religious tradition give a modest degree of credence to the forecast that the world's religions—religions other than their own perhaps—might confront a crisis. *Some* degree of credence only, we stress; yet, it is still worth noting. Could it be the case that an individual religious believer is slightly more worried about someone else's beliefs than his or her own? At minimum, respondents were willing to say that some religious traditions are more vulnerable to a crisis than others.

A Buddhist projected a crisis for some religions but not others: "lumping together all the world's religions is a conceptual error (as in Question 5). The religions of the book (the Abrahamic traditions) would have a very different set of reactions than the Asian traditions." A Buddhist typically belongs to an Asian tradition; so in this case we seem to see an Asian who is worried about the three Abrahamic (monotheistic?) traditions. A Jehovah's Witness tried to gain precision: "I think #5 should say 'some world religions' would be affected," not all.

Some respondents saw the crisis precipitated by news of ETI as temporary, leading eventually to a strengthening. "I believe in the short-term there will be crises...but in the mid- and long-range, pre-contact belief will return to normal or perhaps slightly strengthened," wrote a mainline Protestant.

Now, let us turn to the 205 respondents self-identifying as non-religious. What happens in Question 5 may be quite revealing. We will look again at Question 5, comparing the non-religious with all the religious traditions grouped together.



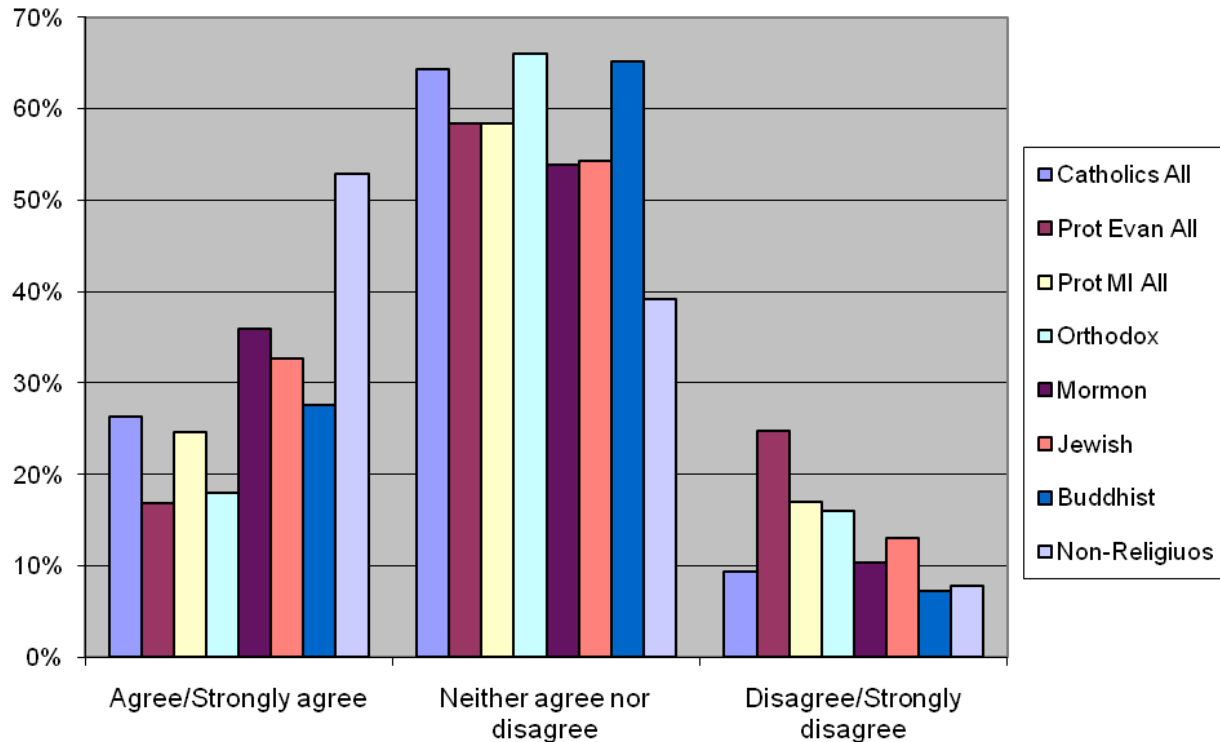
In this chart comparing all those who identify with one or another religious tradition to non-religious respondents, we computed the P value. The P value is much less than 0.0001. This gives us confidence that this comparison is not the result of a mere sampling error. P represents the probability that the two groups are indeed the same, presuming that any apparent difference in a given sample is just the result of random chance. Chance plays a part whenever a sub-sample of a population is taken. Might the difference between religious and non-religious be due merely to a sampling error? We do not think so. The difference between these two groups in our sample would only come about by chance in less than 1 out of 10,000 samples taken from groups were indeed the same.

With this confidence, we observe how a significant majority (69%) of those who identify as non-religious project a crisis for religion. This is twice the average of those who are affiliated with a religious group (34%). That is, the non-religious have a much more negative forecast for religion than do adherents to religion. What might this suggest? Could it suggest that non-religious persons think of themselves as more open to ETI than their religious neighbors? Might this observation speak directly to what some astrobiologists assume, namely, that as scientists they are more open minded than their closed minded religious neighbors?

One self-identified non-religious respondent warned strongly, “our religions, most of which are dogmatic, would be rocked.” Another wrote with nuance: “encounters with aliens will so frighten the ordinary human that he/she will cling more strongly to their beliefs.” From the point of view of the non-religious, religious beliefs are fragile and vulnerable to a crisis.

As we summarize our findings from Questions 3, 4, and 5 of the Peters ETI Religious Crisis Survey, it appears that people who embrace a traditional religious belief system do not fear for their own personal belief; nor are they particularly worried about their own respective religious tradition. A shred of evidence suggests that believers in one religious tradition might be more

Q6. If contact with extraterrestrial intelligent beings occurs, I expect that they will come from a civilization that is more highly evolved than what we have on earth; they will have progressed further in technology, politics, and morality.



inclined to impute fragility to other religions to which they do not subscribe or about which they know little. Non-religious people seem to know too little about religious people, because they are mistaken in their assessment of the fragility of religious beliefs. Our central finding is this: *the hypothesis that the major religious traditions of our world will confront a crisis let alone a collapse is not confirmed by the Peters ETI Religious Crisis Survey.* Furthermore, it appears that non-religious persons are much more likely to deem religion fragile and crisis prone than those who hold religious beliefs.

2.2. Analysis of Responses to Questions 6-10

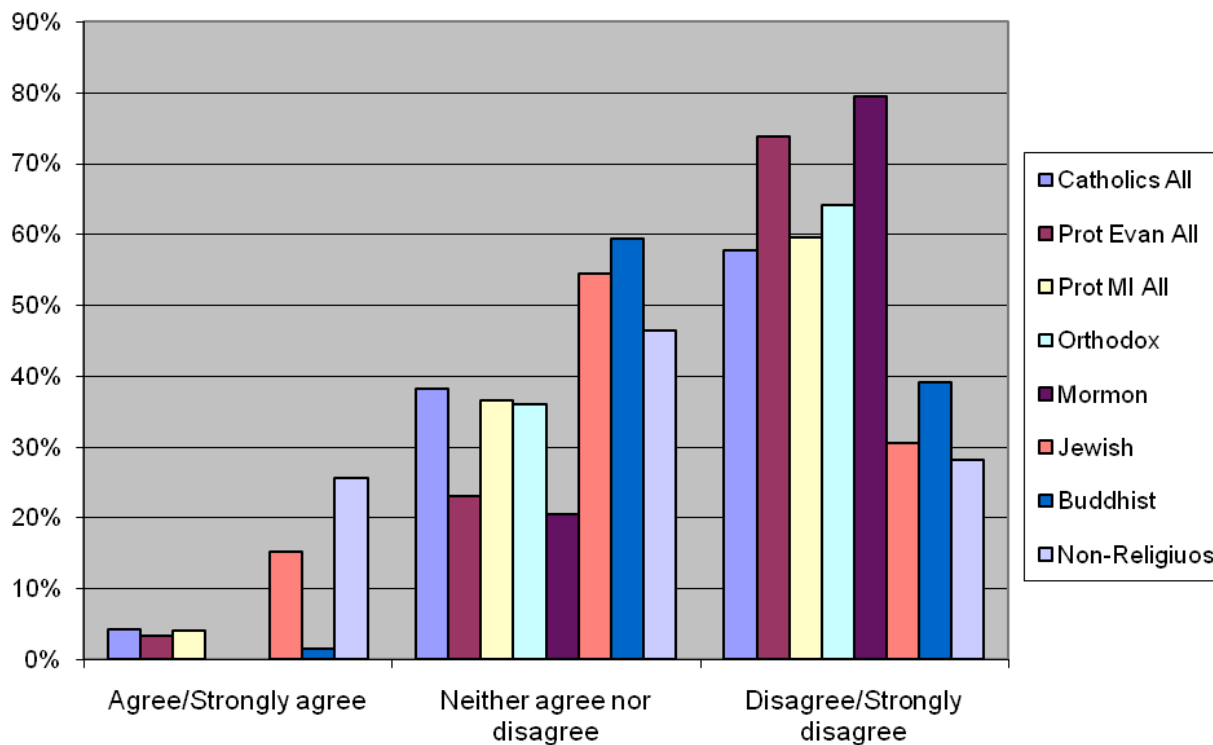
Questions six through ten deal with a number of tacit and overt beliefs regarding ETI that presently exist in the scientific community as well as the wider culture. These questions seek to refine the images religious and non-religious persons have of ETI and its potential impact on our life on earth.

The reason for including this question in the Peters ETI Religious Crisis Survey is due to a widely held position among scientists which affirms the following: evolution is progressive; evolutionary progress leads to increased intelligence; intelligence leads to science and technology; science and technology lead to democracy, an end to war, and eventually peace; and, finally, world peace is the destiny toward which evolution is aimed. It follows from this assumption that, if an ETI civilization has evolved longer than ours on earth, then it will have achieved advances in health, ecology, politics, and morality; and, further, ETI will even have replaced religion with science. More highly evolved ETI, accordingly, will treat earth with benevolence, bringing to earth the equivalent of technological salvation. This assumption is dubious for two reasons: (1) specialists in evolutionary biology frequently deny that evolution is progressive, either on earth or on any other planet where a second genesis of life might occur; and (2) this assumption seems to be naïve about the relationship of the concomitant growth of science and morality among intelligent beings. Human nature would seem to refute such an assumption regarding co-growth, regardless of how widespread it is. “Contact optimists often assume that more advanced extraterrestrials will treat us benignly,” writes Michael Michaud. “Technologically superior aliens, many argue, will have evolved past the warlike behavior we have seen in our own species....The human example provides no support for such optimistic statements” (Michaud, 304). With this as background, the Peters ETI Religious Crisis Survey poses questions to ferret out such a constellation of assumptions.

Because of the significant number of respondents in the Neither agree nor disagree category, and due to additional respondent comments, it appears that many are reluctant to combine advance in science with advance in politics and morality. An advance in intelligence or in science does not necessarily imply a higher level of moral commitment nor a move in the direction of peace. “I’m not sure advances in politics and technology necessarily go hand-in-hand with advances in morality, or vice versa,” comments a mainline Protestant. “The simple fact of technology says nothing about advanced morality,” iterates a Roman Catholic; “when non-terrestrial beings show up on the horizon they may just be thugs.” A Buddhist wrote, “I believe they [ETI] will be more advanced in technology, possibly politics, but not morality—hence the neutral answer.” Another respondent criticizes the “epistemological bias” of Question 6, adding “one must look back no further than the World Wars of the 20th century to understand how incongruent technological progress and moral progress can be.” We conclude that both those who disagree and those who are in the neither category are allied in opposition to the widespread assumption regarding progressive evolution.

Of astounding significance is that we find more than 50% agreement among those who self-identify as non-religious. This suggests that more non-religious than religious individuals make the progressive evolution assumption. Even so, one non-religious respondent comments: “it’s likely that they [ETI] will be more technologically advanced than us...but that doesn’t necessarily mean that they will be morally advanced. I think their morality will likely be alien to us (no pun intended).”

Q7. If contact with extraterrestrial intelligent beings occurs, I expect that they will have no religion, that they will rely solely on scientific knowledge to the exclusion of religious beliefs.

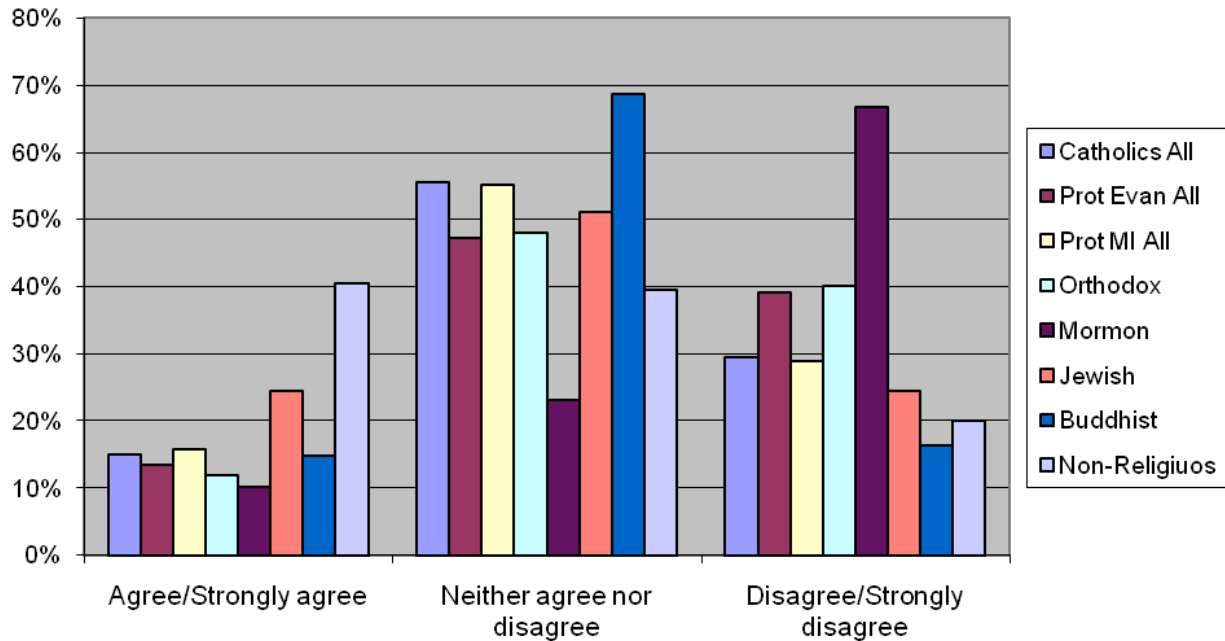


The reason for asking Question 7 is that included in the assumption regarding progressive evolution mentioned above is that science surpasses religion, that allegedly a more highly evolved civilization would be non-religious. The Disagree/Strongly disagree received well above 50% among those self-identifying as Catholic, mainline Protestant, evangelical Protestant, Orthodox Christian, and Mormon. Jewish, Buddhist, and Non-Religious tended to cluster in the Neither agree nor disagree range. Of note in the Agree/Strongly agree range we find 25% of those self-identifying as Non-Religious, the only group to score this high.

As already mentioned, the Non-Religious category includes a variety of outlooks. Perhaps some (but not all) within this category share belief in the evolutionary superiority of science over religion. Respondent comments point in this direction. “Religious superstition is likely the hallmark of a youthful sentient species. As an intelligent sapient species evolves, science and materialism regularly trump the unfounded, undemonstrated, and untested beliefs of religion,” wrote one who self-identified as Non-Religious. Another wrote, “I believe that we will evolve into an atheistic system in the far future. I also think that any advanced race will also be atheistic.”

If the responses we received from Question 7 provide worthwhile data, they would indicate that a minority of Non-Religious persons hold to the view of progressive evolution, even though it does not dominate.

Q8. Extraterrestrial beings are likely to have religious beliefs and practices which will conflict sharply with established beliefs and practices as we know them on earth.



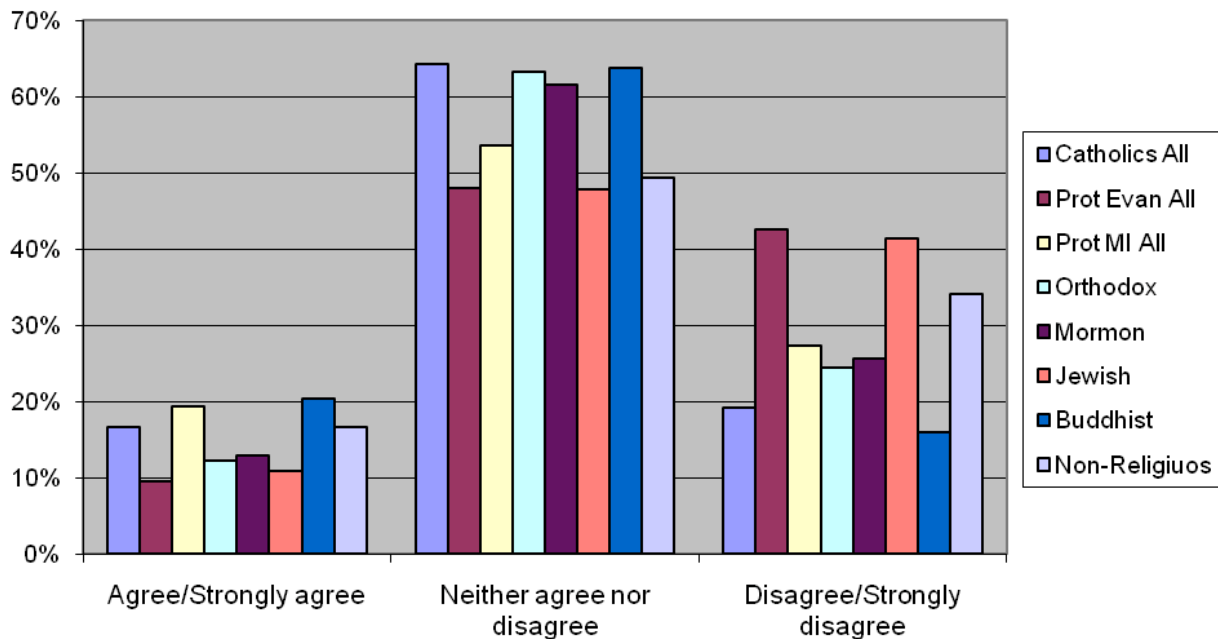
If it is the case that earth’s religious traditions would suffer a crisis or collapse upon hearing of an extraterrestrial intelligent civilization, we might want to inquire: why? What is it about ETI that would precipitate such a crisis? A number of reasons have surfaced. Two are of particular interest. One such reason is that contact with ETI would allegedly de-center or de-anthropomorphize our terrestrial consciousness. The reasoning here presupposes that earth’s religions are earth-centric and anthropocentric. Upon hearing of sentient beings in outer space who are our equals or perhaps even our superiors, then allegedly our fragile or brittle self-centeredness would collapse.

A second reason we might forecast a religious crisis follows a different logic. What is projected here is a conflict of beliefs, a conflict between the established belief systems of terrestrial religions and a competing set of religious our counter-religious ETI beliefs. If ETI turn out to be superior to us, then their beliefs would be sufficiently superior as to persuade us to give up our previous perspectives and adopt the new one. Earth’s religions would disappear as earthlings convert to the ETI perspective on reality.

Might either or both of these two patterns of reasoning be at work among respondents to Question 8? Not according to the comments. On anthropocentrism, “Sorry to sound so negative,” wrote one Orthodox respondent; “Q 6,7,&8 and the others are too anthropocentric.” Evidently this Christian accepts the above logic as a theological perspective and not as a counter-theological perspective.

Religious respondents show no indication of fearing a conflict of religious doctrine between themselves and ETI theologians. One evangelical Protestant wrote: “I think that extraterrestrial religious beliefs and traditions will differ, perhaps greatly in some ways...However, they live in

Q9. If extraterrestrial intelligent beings exist and live in a more advanced civilization than ours, we can expect they will be willing to come to earth to help us achieve world peace and ecological health.



the same universe with the same God, and a similar array of religious responses and developments would likely have developed on their world....There would probably be noticeable similarities between points of their theology and Christian theology.” Another argued that “truth is universal. It does not change from planet to planet, life form to life form.” One Roman Catholic might disagree, expecting without apparent anxiety differences between earth perspectives and ETI perspectives: “I would welcome such discoveries of extraterrestrials but I would not expect them to share my points of view.”

What might we learn from the responses to Question 8? The clustering in the Neither Agree/disagree middle with a near comparable clustering in the Disagree/Strongly disagree range makes interpretation a bit difficult. It is not clear to us what conclusions might be drawn. We note the singular strength of disagreement among Mormons, perhaps due to the existing incorporation of ETI into Mormon theology. Otherwise, however, no clear trend seems discernable to us here.

This question teases out assumptions we make regarding the character of ETI. Might there exist among us a hope that evolutionarily more advanced ETI would be benevolent and want to share with Earth its solutions to human problems? Certainly this is what some scientists hope for. Avid SETI supporters such as Carl Sagan and Frank Drake, for example, have predicted that contact with extraterrestrials “would inevitably enrich mankind beyond imagination” (Sagan and Drake). Drake believes that advanced ETI civilizations live in a medical utopia, free of disease; and ETIs are even capable of producing immortality. Drake proceeds to speculate that the technologically advanced ETI are also benevolent; and space aliens could bring to earth the benefits of their ecological science, advanced medicine, and their ability to prevent war. “Everything we know

says there are other civilizations out there to be found. The discovery of such civilizations would enrich our civilization with valuable information about science, technology, and sociology. This information could directly improve our abilities to conserve and to deal with sociological problems—poverty for example. Cheap energy is another potential benefit of discovery, as are advancements in medicine” (Richards).

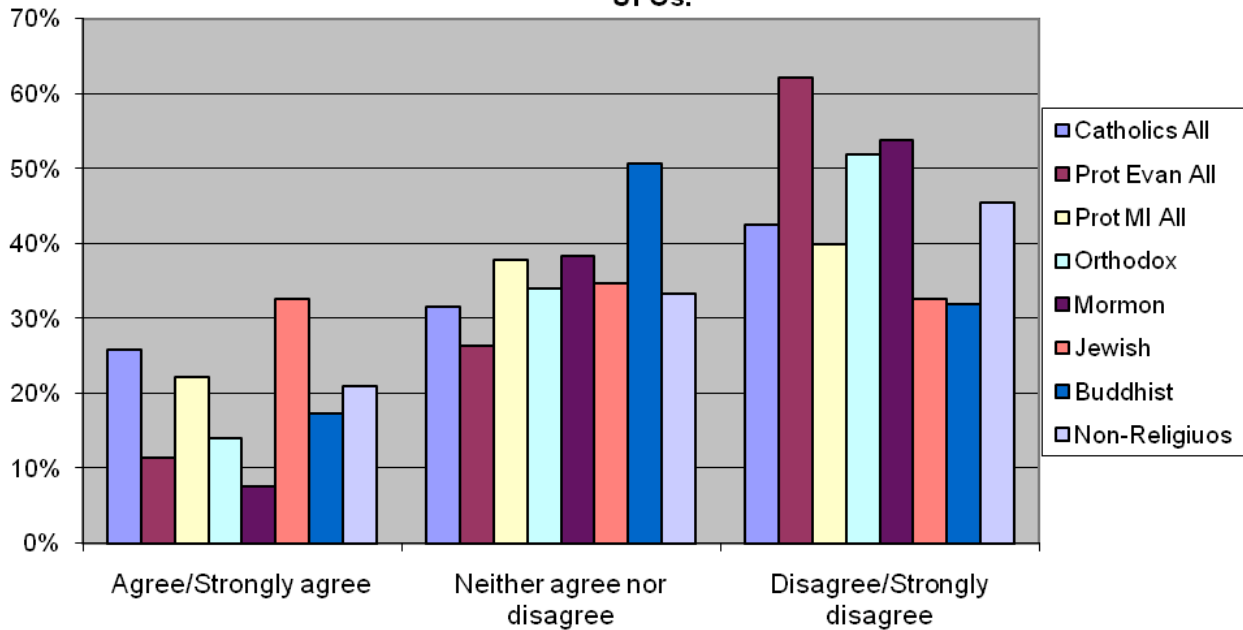
It is important to note how in the mind of Sagan, Drake, and other SETI scientists that the benefits of contact with ETI will come through a sharing of information, not through visitation. Interstellar space travel is too expensive and too difficult for us to expect it to happen. The impact on earth of ETI’s advanced knowledge will come to us via radio communication, it is assumed here. These astrobiologists do not look to the skies for saviors on fiery chariots; rather, they listen to the skies for ETI information that could be transformatory of life on earth.

Such a set of beliefs indicates a thirst, a thirst for redemption or salvation to come to earth from ETI life forms. Even though it is cast in scientific language, this is a religious thirst. With empathetic understanding, Michaud writes, “the frustrations and limitations of human life on Earth, the overhanging threat of disastrous conflict, the lack of moral anchors, our isolation amid the vastness of an unfeeling universe, our apparent helplessness against uncaring entropy, all have driven many humans to hope for intervention from above” (Michaud, 230). SETI critics such as Edward Regis show less empathy but make the same point, namely, what we see here is a secular hope for “salvation from the Stars” (Regis, 243). What comes packaged in scientific language is a myth, a myth of salvation for earth to be delivered by what at this point is only an imaginary civilization of extraterrestrial intelligent beings.

We posed Question 9 to ask whether religious people might believe this myth of ETI salvation. Would such a belief be unique to astrobiologists, or might the average religious person also pin hopes for salvation on benevolent ETI? The clustering majority of responses in the Neither agree/disagree middle suggests that the ETI salvation myth is not a strong force in religious consciousness. However, it would be too much to say that religious believers outrightly reject the myth. This is because they might not have given it much consideration one way or the other. This survey falls short of precision at this point.

Might respondent comments help us discern a direction of thought? One mainline Protestant flatly rejected the myth: “I strongly disagree that they [ETI] could actually come to help us.” A Buddhist complained that the “survey does not address the possibility that they [ETI] may not be benevolent.” An evangelical Protestant held out for ambiguity: “They may come to help, but they may come to exploit and plunder.” One non-religious person said curtly: “SETI sucks.” In short, the survey did not provide evidence for widespread belief in this secularized hope for earth’s salvation to come from intelligences among the stars.

Q10. Within the next generation it is more likely than not that we will learn of one or more extraterrestrial civilizations through the scientific efforts of SETI (the Search for Extraterrestrial Intelligent Life) or through contact made by UFOs.



Parenthetically, we the survey researchers do not concur that “SETI sucks.” We heartily endorse the mission of SETI and share excitement over the possible discoveries of the astrobiologists currently at work. The concern of this survey is limited to one and only one matter, namely, testing the hypothesis that terrestrial religions are subject to crisis or collapse.

Question 10 is a straightforward request for a prognostication, a prediction. By asking to speculate about the possibility of contact with ETI either via SETI or UFO visitation, answers might entail belief in the existence or non-existence of extraterrestrials. The low number of Agree/Strongly agree respondents suggest a dearth of contact optimists among religious people. When we turn to the comments, many reported that they simply lacked the knowledge to make a forecast regarding contact. One self-identified Buddhist in the Neither agree/nor disagree category said, “my comments mostly reflect a Zen “don’t know” mind.”

Other comments were more forceful. An Orthodox Christian supported the rare earth position for theological reasons: “I strongly disbelieve in the possibility of other intelligent life other than on earth. I think Christ came to release us from our sins on this planet and that is exclusive.” One evangelical Protestant enunciated the same rare earth commitment but for non-theological reasons: “advanced life, especially intelligent life, is so rare that Earth is probably its only location.” We note the logic of this response. Affirming the low probability of making contact with ETI is done so as a scientific judgment—namely, intelligent life is “rare”—rather than a theological judgment. Rejection of the probability of ETI contact is not the result of a religious belief, in this case.

A curiously convoluted argument against our making contact with ETI was articulated by a North American Lutheran: “I am convinced that extraterrestrial life does not exist...My

theological reasoning is as follows: God created the universe and then man in his own image. This creation then rebelled against God and necessitated judgment. God then worked through history to fulfill that judgment by taking the punishment on Himself in the person of Jesus...It is quite possible that there are other universes where extraterrestrials exist, and those people did or did not rebel, but they would not visit our planet (since they are not part of our universe).”

Contact optimists also made their position known. A mainline Protestant asserted, “Honestly, I think extraterrestrial life probably exists somewhere else.” And an evangelical forecasted: “I do believe the inhabitants of the UFOs will make contact with us within the next 30 years.”

One mainline Protestant surmised: “I think they will be out there, but it may be ages before we meet them.” A comment such as this suggests the following: it appears that we ought not divide these religious respondents simply into the two categories of rare earthers and contact optimists. This is because religious people tend to be open the possibility of the existence of ETI but not necessarily optimistic regarding near future contact. One non-religious respondent made this point: “it is likely we will identify a planet that shows signs of habitation. However, contact is unlikely given the vast distances.”

4. Conclusion

This survey has sought to provide data relevant to confirming or disconfirming the following hypothesis: *upon confirmation of contact between earth and an extraterrestrial civilization of intelligent beings, the long established religious traditions of earth would confront a crisis of belief and perhaps even collapse.* Responses from persons self-identifying with one of seven major religious traditions report that they do not fear an impending collapse in their own religious belief system. Taking into account a minority who for theological or scientific reasons affirm the rare earth position, relatively little fragility in existing religious beliefs seems evident.

If the hypothesis of impending religious collapse might be considered true, the burden of proof lies with those advocating the hypothesis. Advocates would have to claim that religious believers are not themselves in the best position to understand their own beliefs. Advocates would have to provide evidence that despite the self-understanding of religious believers it is still the case that such belief is subject to challenge by new knowledge of ETIL. To our knowledge, such proof has not yet been introduced into the public argument. Until it is, we are confident that the self-understanding of self-identified religious believers counts significantly in disconfirming the hypothesis.

5. Sources Cited

Alexander, Victoria (2003). "Extraterrestrial Life and Religion: The Alexander UFO Religious Crisis Survey, in *UFO Religions*, edited by James R. Lewis. Amherst NY: Prometheus Books, pp. 359-370.

Banerjee, Neela (2008). "Survey Shows U.S. Religious Tolerance," *The New York Times* (June 24, 2008)
<http://www.nytimes.com/2008/06/24/us/24religion.html?ex=1372046400&en=225221e0d3f54ab3&ei=5124&partner=permalink&exprod=permalink> accessed 14/08/08.

Davies, Paul (1995). *Are We Alone?* London: Penguin.

Michaud, Michael A.G. (2007). *Contact with Alien Civilizations*. New York: Copernicus Books.

Peters, Ted (2008). *The Evolution of Terrestrial and Extraterrestrial Life*. Goshen IN: Pandora Press.

Regis, Edward, editor (1985). *Extraterrestrials: Science and Alien Intelligence*. Cambridge UK: Cambridge University Press.

Richards, Diane (2003). "Interview with Dr. Frank Drake," *SETI Institute news*, 12:1 (First Quarter 2003) 5.

Roper (2002). *UFOs & Extraterrestrial Life: Americans' Beliefs and Personal Experiences*. Prepared for the SCI FI Channel by Roper Poll. <http://www.scifi.com/ufo/roper/03.html>.

Sagan, Carl and Frank Drake (1997). "The Search for Extraterrestrial Intelligence," *Scientific American* (January 6, 1997) <http://www.sciam.com/article.cfm?id=000B35F3-A4B2-1C59-B882809EC588ED9F&print=true> .

Tarter, Jill Cornell (2000). "SETI and the Religions of the Universe," in *Many Worlds: The New Universe, Extraterrestrial Life and the Theological Implications*, edited by Steven J. Dick. Philadelphia and London: Templeton Foundation Press, 143-149.

Vakoch, D.A. and Y.-S. Lee (2000). "Reactions to Receipt of a Message from Extraterrestrial Intelligence: A Cross-Cultural Empirical Study." *Acta Aeronotica*, Vol. 46, No. 10-12; pp. 737-744; www.elsevier.com/locate/actaastro.

6. Appendices

1 Survey Questionnaires

1.1 Paper Survey

1.2 Web Survey

2 Data Tables

2.1 Comparison of Different Religious Traditions

2.2 All Religious Groups Compared to Non-Religious Respondents (with summary)

2.3 Comparison of Clergy, Lay and Religious (with summary)

3 Individual Results for Each Religious Tradition in Pie Charts

3.1 All Respondents

3.2 All Religious Traditions

3.3 Roman Catholic

3.4 Protestant Evangelical

3.5 Protestant Mainline

3.6 Orthodox Christian

3.7 Mormon

3.8 Jewish

3.9 Buddhist

3.10 non-Religious

4. Comments by Respondents