

What are Malone Students' Views on Human Origins in Comparison to National
Polls, and What Factors Influence Those Views?

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Since the introduction of Charles Darwin's *The Origin of Species* in 1859 and, consequently, his theory of evolution into the scientific world, there has been continuing conflict between the traditional Biblical belief in a 6-day creation of the world, also referred to as creationism, and the scientific evidence that points towards life evolving over billions of years. This discrepancy has been seen historically in America more than in many European countries, which are much more accepting of the idea that humans evolved from another species (Coyne 2654). This contrast is evident because of the large religious population in America, a majority of which hold fast to a literal interpretation of the Genesis account of creation. The religious opposition to evolution began soon after evolutionary theory was popularized, and the persistence of this view has been seen in several legal battles, as well as in the development of scientific creationism (Pigliucci 6-7).

National Gallup polls beginning in 1982 have asked the US population if they believe whether humans were created by God in their current form, have evolved over time with God's guidance, or have evolved over time without any supernatural intervention (Swift). Results from this poll have shown that the view that God created humans in their present form has been the dominant belief and that there is a significantly smaller percentage of the American population that believes that humans developed over time by natural means only. However, there seems to be a declining percentage of those who believe in a more literal Biblical view of human development in more recent times. From 1982 until 2012,

almost half of the population believed that God created man in the present form, but in 2017, only 38% of those that were surveyed agreed with that stance (Swift).

Religion has a notable influence on this distribution of beliefs about human development; factors such as church attendance and frequency of prayer have been shown to influence one's belief in either evolution or Biblical creation (Hill 20). Specifically, those who align with evangelical Christian denominations have the highest tendency to reject evolution and instead accept the view of a Biblical 6-day creation of the universe ("Religion in America"). However, not every religious group has a problem harmonizing modern evolutionary theory with their beliefs, and even several larger Christian denominations accept evolution as God's mechanism for creating the world ("Religious Groups' Views on Evolution"). It can be inferred from this information that being affiliated with certain Christian denominations can have an impact on the degree to which one believes in evolutionary theory.

Religiosity may also have a role in what someone believes about the general relationship between science and religion based on four general frameworks that have been proposed (Kurtz 113). The first view is the warfare model, which says that science and religion are in discord and cannot be reconciled together. This framework may be held by those who are fundamentalist Christians and find that evolution threatens their view of Genesis and the Bible as a whole. There is also a framework, which Kurtz calls the

separate realms model, that sees science and religion as being distinctly independent spheres of thought and therefore not conflicting nor interacting at all. Those who hold to this view may have the understanding that science can only comment on the natural world and therefore cannot come to a conclusion about religious concepts. The accommodation model suggests that religion can accommodate to modern science by reinterpreting certain theological ideas in light of scientific evidence. Kurtz clarifies that the reinterpretation only occurs in the theological ideas and not in the scientific evidence. The last framework, the engagement model, explains how science and religion are beneficial to each other and can exist together without contention. In this way, science and religion equally contribute a greater understanding to the other.

Higher education has also been shown to play a role in the population's belief in human evolution. Those who have experience in higher education are more likely to accept evolution. Among people with a high school education, a college education, or at least some graduate school, those who attended graduate school had the highest degree of acceptance of evolutionary theory, and those who had only attended high school had the lowest degree of acceptance ("Public's View on Human Evolution").

Based on my research, which indicates that factors such as education and religion affect one's view on human origins, I was intrigued to see if these aspects would influence students at Malone University. Therefore, I conducted a survey on Malone's campus, titled "Malone Students' Views on Human Origins."

This survey asked students at Malone about their personal beliefs regarding human origins, as well as the interactions between science and religion, and included several demographic questions about their religious associations and educational experience in order to gain more understanding about the factors that influence one's opinions about evolution. From the research on how religion and higher education affect one's views of human origins, including questions regarding religious affiliation and level of education allowed me to make certain predictions as to how Malone students would answer my survey. This survey has allowed me to directly compare Malone's students' views on human development to the Gallup poll's results of the US population's beliefs as a whole. I also conducted personal interviews with a subset of willing survey participants in an attempt to further explore the rationale behind why students answered the survey questions the way they did.

This thesis project has several important implications and contributions. By answering this question, Malone University itself may benefit from having a greater understanding of what its students believe and how those beliefs impact the students' college experience. I have experienced personal turmoil about the question of accepting or rejecting evolutionary theory, which has led to an increasing curiosity to what others' opinions are regarding their reasoning as to why they do or do not accept evolution as a viable explanation for the origin of human life as we know it. This ongoing interest has culminated into this thesis, which is a survey that will allow me to contribute new information to a larger pool

of research, which includes but is not limited to populations' opinions about creationism and evolution. Although much investigation has been done on a national scale, a small-scale study at a university such as Malone in regard to this specific issue is not nearly as common.

The main questions that this thesis is attempting to answer can be summarized as these: What are Malone students' views on human origins in comparison to national polls, and what factors influence those views? By answering these questions, I hoped to achieve several goals. The information gained from this survey will provide original yet relevant information to the expansive research and scholarly conversation about the debate between evolution and creationism. Another aim of this thesis is to make the students, faculty, and the leadership at Malone more aware of and educated about the distribution of opinions about creationism and evolution among Malone students. Lastly, I hope to see conversations and questions regarding this topic arise in a respectable manner so that students at Malone may think critically about their stance on human origins.

Methods

The survey used for this thesis, titled "What are Malone Students' Views on Human Origins?" was created using Google Forms, and the questions are included in Appendix A. All regulations required by the Malone University Institutional Review Board (IRB) were considered and applied to this research.

Based on the research done prior to the compilation of this survey, the questions selected for the survey were thought to potentially have a correlation with the participants' answer to the question regarding their view on human origins. They were also chosen because they may shed light on the participants' reasons for giving that answer. The main question in this survey asked the participants what their view on human origins is and was taken from a 2017 Gallup poll (Swift) in order to directly compare national results and the results from this particular survey. Another core question included in the survey inquired about how the participants view the interaction of science and religion based on Kurtz's four frameworks. This question was included in order to give potential insight into why the participant answered the Gallup poll question the way that they did.

Two other factors that have an association to belief or disbelief in evolution are education and religion. One of the questions asked how long the participant has studied at Malone, which is based on a study finding a statistical difference between lower- and upperclassmen and their acceptance of evolutionary theory (Witham 162), as well as sources that suggest that people with more higher education are more likely to believe in evolution ("Public's Views on Human Evolution"). Since a large number of sources show a significant influence of denominational affiliation on acceptance of evolution, such as when Martin states that "Christian religiosity was the strongest correlate of disbelief in

evolution” (420), I included a question that asked the participants to give their religious affiliation, if any.

The remaining demographic questions were formulated based on factors I perceived could influence the participants’ answers to the Gallup poll question. Because studies have shown that there is a decreasing familiarity with creationist views (Newport), there are questions included that asked the participants how many science and theology classes they have taken in high school and college, since it may affect their knowledge of the topics covered in the survey. For similar reasons, the participants were also asked to state what their current major is.

Another question included at the end of the survey asked if the participant would be willing to be further interviewed in person. An interview with select participants was beneficial to the thesis project to gather more information and insight, in order to clarify the results of the survey. The specific interview questions are included in Appendix B.

The survey was distributed to the student body via email and only the responses from traditional undergraduate students were included. All of the survey results were collected in the Google Forms database, and the direct results can be found in Appendix C. The results were then analyzed by JMP statistical software to find potential significant correlations between demographic information and responses to opinion questions. The extended response questions asking about religious affiliation, major, number of science classes, and number of theology classes were standardized. The extended response

question asking to explain their reasoning to their answer for the Gallup poll question was analyzed for common themes (Braun and Clarke).

After analyzing the results, I interviewed eight willing participants in order to gain a more detailed explanation of certain answers that I found to have a statistically significant relationship with beliefs about evolution. Two interviewees were randomly picked from each answer category from the Gallup poll question. Because there were only two participants from the category of “Humans evolved, God had no part in the process,” that group was oversampled. Before being interviewed, each participant signed a consent form, which, by signing it, allowed me to record the interviews on my iPhone using voice memos so that I could re-listen to and analyze the results. After the interviews were completed, I assigned a random number from 1-8 to each participant.

Thematic analysis, as outlined by Hatch, was used to gain insight from the qualitative data. The first step in this process was to listen to the audio recordings of the interviews and write down the main points of each response. From these responses, I then made a spreadsheet comparing each of their answers to the Gallup poll question. Once I could see the responses side by side, I then looked for common themes among the results. After this, Dr. Lauren Seifert also analyzed the results for themes independently, and we discussed our results.

Results from Survey

A total of 111 traditional undergraduate students at Malone took the survey, as well as 2 non-traditional students whose responses are not included in the results. Non-traditional students, in this case, are those who are adult learners and/or degree completion students. The summary of the direct results for the questions in the survey is included in Appendix C.

The main question of the survey from the Gallup poll asks, “Which of the following statements comes closest to your views on the origin and development of human beings?”. The results for this question are shown in Figure 1.

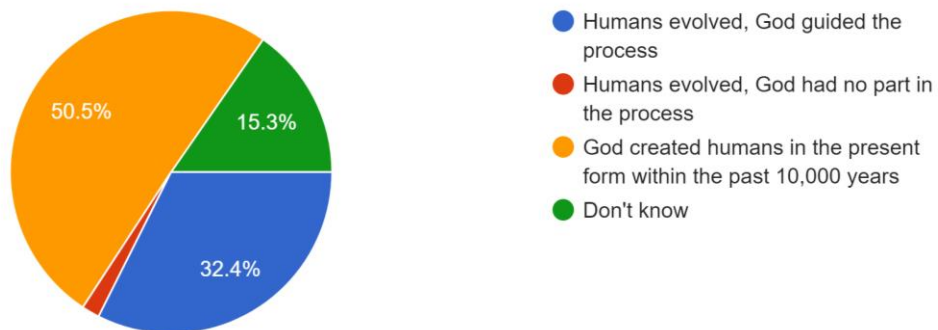


Fig. 1 Results from the question “Which of the following statements comes closest to your views on the origin and development of human beings?”

Because the Gallup poll question was the focus of the survey, all of the other opinion and demographic questions were analyzed against this question. Out of all of the questions, the responses to three questions had a significant

relationship with the responses to my main question. These questions were “How do you see science and religion interacting based on these 4 views?” ($\chi^2 = 26.18, p = 0.0002$), “What is your religious affiliation, if any?” ($\chi^2 = 85.63, p = < 0.0001$) and “Approximately how many science classes have you taken throughout your high school and college education?” ($\chi^2 = 9.32, p = 0.025$). The mean number of science classes for students answering “Don’t know” was 5.6 ± 1.1 , for those answering “God created humans in the present form within the past 10,000 years” was 7.5 ± 0.6 , for those answering “Humans evolved, God guided the process” was 9.2 ± 0.7 , and for those answering “Humans evolved, God had no part in the process” was 9.0 ± 3.1 (all statistics are mean \pm SE, $F_{3, 107} = 2.8, p = 0.04$).

The factors that did not have a significant relationship to the Gallup poll question are educational background, class status, major at Malone, number of Bible and theology courses, and whether or not the participant is a first generation college student. The contingency analyses for each of the three questions against the responses to the Gallup poll question are shown in Figures 2-4 below.

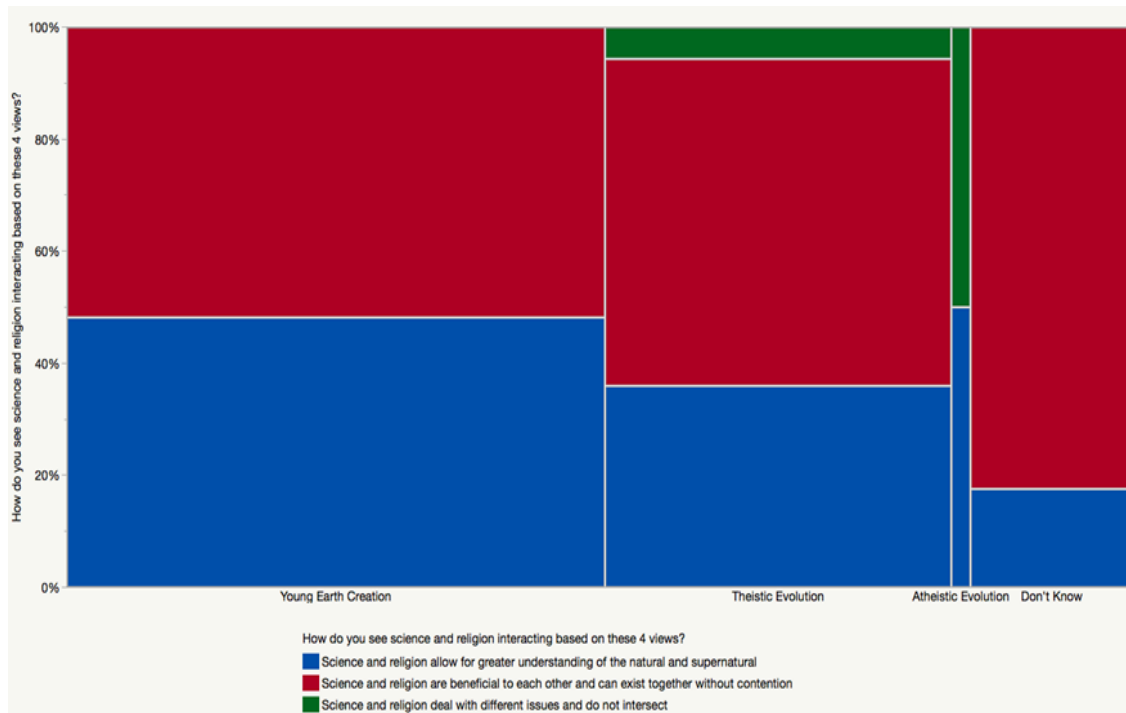


Fig. 2 Contingency Analysis of “Which of the following statements comes closest to your views on the origin and development of human beings?” by “How do you see science and religion interacting based on these 4 views?”

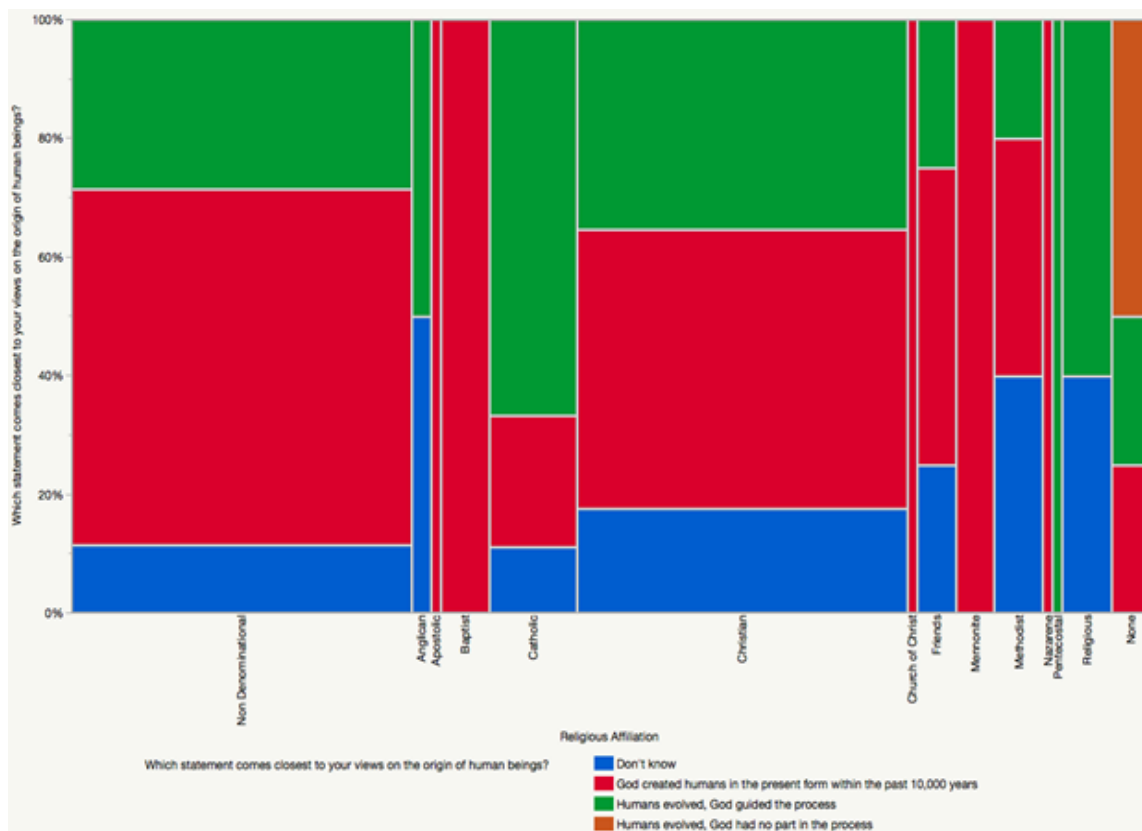


Fig. 3 Contingency Analysis of “Which of the following statements comes closest to your views on the origin and development of human beings?” by “What is your religious affiliation, if any?”

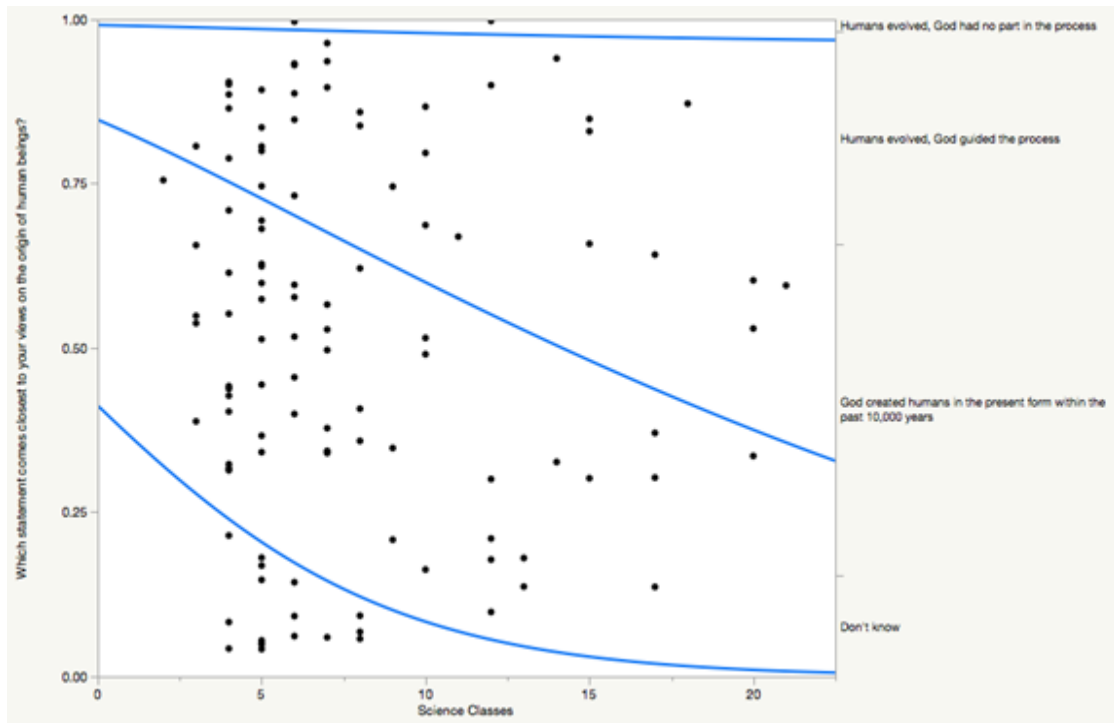


Fig. 4 Logistic Fit of “Which of the following statements comes closest to your views on the origin and development of human beings?” By “Approximately how many science classes have you taken throughout your high school and college education?”

The extended results, where participants explained their answer to the Gallup poll question, contained several distinct patterns in each of the 4 question groups. Among participants answering "Don't know," there was much variance in their explanation, but certain similar phrases appeared throughout the answers. Out of 17 individual answers, God creating or being the start of life was mentioned 7 times, science explaining certain evidence was mentioned 4 times, and not knowing enough information was mentioned 6 times. For those who

answered “God created humans in the present form within the past 10,000 years,” there were several key phrases that were repeated multiple times. Out of 56 individual responses, God creating humans specifically was mentioned 31 times, God creating life in general was mentioned 17 times, the way someone was taught or raised was mentioned 6 times, the Bible and what it said was mentioned 15 times, Genesis specifically and what it said was mentioned 14 times, not believing in evolution/scientific evidence was mentioned 7 times, and acknowledging some adaptation or evolution was mentioned 10 times. There were also very clear themes amongst the participants who responded “Humans evolved, God guided the process.” Out of the 36 individual responses, God having a role or creating was mentioned 16 times, the evidence for evolution was mentioned 8 times, the phrase “God guided” was mentioned 3 times, human adaptation was mentioned 7 times, believing a mixture of God/the Bible *and* scientific evidence or evolution was mentioned 6 times, believing scientific evidence/evolution in general was mentioned 4 times, and personal experiences were mentioned 3 times. No patterns were able to be distinguished from the two respondents answering “Humans evolved, God had no part in the process.”

Results from Interviews

The thematic analysis used to examine the qualitative data from the follow-up interviews was conducted by myself and by Dr. Lauren Seifert. We both concluded that there were three major themes that appeared in the interviewees’ responses, along with several minor themes. The major themes were determined

by similar phrases that were evident in a majority of responses. Major themes were overarching and found throughout the interviewees' responses to various questions. These themes were thought to be influential and important to both the interviewees as well as to the overall results of the survey. The minor themes are those trends that were notable but were not as broad as the major themes. Rather, they focus on a more particular thought shared by certain participants.

The first major theme is that all eight participants stated that having conversation about the discrepancy between creationist and evolutionist views is important, especially at Malone. This is arguably the strongest theme because of the fact that every interviewee stressed this importance. Two minor themes that seem to fall under this major theme are that five participants explicitly stated that it is beneficial to hear other perspectives on this issue, and six participants mentioned that they would encourage others to have openness and questioning when contemplating their views. Some of the interviewees responses that reflect and support these themes are:

It's good for me to learn more about it. I am type of person that, before I give an answer, has to know all of the views and understand where other people are coming from...it's good to discuss it and know what everyone believes so that you can have a civil conversation. (Subject #1)

If nothing else, we have a community of faith at Malone and we have science majors at Malone...if the two are supposed to be able to exist together, we should probably be talking about it. (Subject #3)

You can hear about two sides to the story and find a connection between them. (Subject #8)

The second major theme, which supports the data already collected about religion's impact on acceptance of evolution, is that seven of the eight participants said that their religious background plays a vital role in how they perceive the origin of humans. In addition, all participants except for those who answered "Humans evolved, God had no part in the process" are actively practicing their faith and have strong ties to a certain church or denomination. Religion's impact is varied and specific to each person, and responses that show the different effects it has on their views are:

A lot of the ideas that I have that deal with human origins come from how I was raised and the [religious] background that I have. (Subject #2)

For them it almost seems as if those beliefs [about evolution] are tied to their faith instead of those things being separate expressions. (Subject #6)

People will disagree and refuse to believe each other mostly because of their core values. If something you believe is attached to you as a person, you are less likely to change your mind about it. (Subject #7)

The last major theme that stood out was that five of the eight participants said that in some way, this topic was brought up during their experience at Malone. Some of the examples included spiritual formation opportunities (SFOs), class experiences, and discussions on campus. It is interesting to note that the classes mentioned included more than just science classes, as education,

theology, and capstone classes were also mentioned. Although this theme does not have as high of saturation as the other two main themes, it is significant because it gives a testament to the faith integration aspect at Malone, which is having an impact on students' views. Specific quotes from the interviewees that validate this point are:

I think it matters that this conversation is taking place at a place where Christians are learning science. (Subject #3)

We talked about Genesis in my Old Testament course, and he [the professor] opened up discussion about creation...and opened up the doors to a new way of thinking on that subject. (Subject #4)

It is so critical that a Christian education system can teach these things [creationism, Intelligent Design, evolution] from a Christian perspective and acknowledge that there may be a difference of opinion from professor to professor and from student to student...I think I am much more knowledgeable about evolution since coming to Malone. (Subject #6)

Along with those three major themes, two other minor themes appeared that are worth mentioning. While discussing the interview question concerning experience with conflict, rigidity of either the creationist side or the evolution side was mentioned. Four participants noted that one side was more hostile and strict about their views than the other; two interviewees said that the *evolution* side was firmer in their view and two interviewees said that the *creationist* side was more belligerent. The other four noticed that both sides were rigid in their beliefs

and were not as open to discussion with the other side. This inflexibility was experienced in personal conversations with people who had opposing beliefs; it was also observed in discussions amongst other people. Another minor theme that appeared was that 5 interviewees admitted that they have changed their views about evolution since coming to Malone, either in a drastic or subtle way. The three who said that their views have not shifted included both participants who answered “God created humans in the present form within the past 10,000 years.”

Discussion

In comparing the results of the main question from my survey to the results of the 2017 Gallup poll results, Malone students did not respond in the same proportions as did the respondents to the national poll. To restate the results from Fig. 1, 50.5% of participants answered “God created humans in the present form in the past 10,000 years,” 32.4% of participants answered “Humans evolved, God guided the process,” 1.8% of participants answered “Humans evolved, God had no part in the process,” and 15.3% of participants answered “Don’t know.” In contrast, in the 2017 Gallup poll survey, 38% of participants answered “God created humans in the present form in the past 10,000 years,” 38% of participants answered “Humans evolved, God guided the process,” and 19% of participants answered “Humans evolved, God had no part in the process,” leaving the remaining 5% with the answer of “Don’t know” (Swift).

When this same poll was given in previous years, the percentage of those who responded with “God created humans in the present form in the past 10,000 years” was noticeably higher than it was in 2017, ranging from 40-47% between the years of 1982 and 2014 (“In U.S., 42% Believe Creationist View of Human Origins”). The percentage of those at Malone who hold to a Biblical interpretation of human origins seems to align more with the national stance from several years ago. Thus, the declining belief in creationism seen in America is not mirrored within Malone’s population.

I believe that one of the reasons for this difference is due to the concentration of students with religious backgrounds at Malone. Religion, especially Christian religiosity, has been shown to have a strong correlation to a belief in a traditional Biblical stance on creation and to an opposition to evolution. This trend is also evidenced by the fact that the two Malone participants who answered the Gallup poll question with the atheistic evolution stance were two of the four total participants that did not have any religious affiliation, a group that comprised less than 4% of total respondents.

Although religiosity does play a major role in shaping one’s belief about the way humans originated and developed, not all denominations are in complete opposition to evolution. For example, Catholics accept evolution as a viable explanation as to how humans developed (“Religious Groups’ Views on Evolution”). This notion is reflected in my survey results, as 67% of those who identify as Catholic accept evolution with God’s guidance, compared to 22% of

Catholics who are creationists and 11% of Catholics who are unsure of their stance on human origins. Behind Non-denominational and Christian, Catholicism was the third largest religious group in my survey, comprising 8% of the total sample.

Another denomination represented in the results that aligned with the official denominational statement of faith were the Baptists. All of the Baptists that took this survey answered that God created humans in the way and timeline given in the Genesis account in the Bible (Martin 423). This was a result that showed an expected, clear trend in how the participants answered the survey. Those who identified as Baptist comprised almost 5% of the total number of participants. Mennonites, like Baptists, also hold fast to a Biblical view of creation according to Article 6 of their official confession of faith. Mennonites were a small portion of the total participants, making up less than 4%, but all of their responses held true to the official stance of the Mennonite Church.

The largest religious groups that were represented in my survey were Non-denominational and Christian, which are both broad groups that do not have an overarching official stance of how compatible evolution is with Bible-based faith. Individually, each category made up approximately 30% of the total responses in my survey. Since the survey question regarding religious affiliation did not specify for *denominational* affiliation, there is most likely some overlap between Christian and Non-denominational. Additionally, had there been a question asking for denominational alignment, those who said that they were

Christians may have stated whether or not they were non-denominational or if they identified with a specific Christian denomination.

Because of this intersection between Christian and Non-denominational, I will discuss them as one group, which I will call Non-denominational Christian. At Malone, 14% of Non-denominational Christians answered the Gallup poll question with "Don't know," 54% answered with "God created humans in the present form within the past 10,000 years," and 32% answered with "Humans evolved, God guided the process." Clearly, those who hold to a creationist stance make up a significant portion of Non-denominational Christians, which is to be expected. However, a large percentage *also* accept evolutionary theory or are unsure of what to believe.

Other notable trends when analyzing denominations include the Methodists and Friends. The Methodists, which comprise 4.5% of the participants, had 1-2 representatives in all categories except "Humans evolved, God had no part in the process." The Methodist position is that evolution is compatible with faith and the Bible, so the results for how the Methodists answered the Gallup poll question does not exactly line up with the official statement of faith. The Friends denomination had a similar sample size and distribution of answers to the Methodists, but their official stance is unclear (Martin 423). Although there were several other denominations included in the results of my survey, in many cases there were only one or two per group. From

this small sample size, it is hard to discern if the answers given by each group are truly representative of the official denominational stance.

It is evident that having religion affects one's view of evolutionary theory, but it also affects the perspective of religion and science in a broader sense (Hill 5). The question referring to how one views science and religion and the Gallup poll question may have had a notable connection, I believe, due partially to the fact that no one gave the answer of "Science and religion are at odds and are incompatible," which is an encouraging result. Since Malone is a place where science and religion intersect, having a view that science and religion are incompatible could potentially cause a conflict to arise. Many of the interviewees, when asked to explain their answer to that question, said that science is a way to see God's world better.

The last survey question that had a notable relationship to the Gallup poll question was about the number of science classes each participant has taken. Within each category for the Gallup poll, the average number of science classes taken varied by a significant margin. The mean number for "Don't know" was 5.6 for "God created humans in the present form within the past 10,000 years" was 7.5, and for "Humans evolved, God guided the process" was 9.0. Although the average varies only slightly, it does show the important relationship that those who accept evolution have taken more science classes on average than those who deny it or are unsure of what to believe.

Even though evidence has shown that “religion was strongly and significantly associated with lower science literacy” (Coyne 2658), every participant who believes in a God-guided evolution of humans and therefore is more accepting of modern evolutionary theory has a religious affiliation. There is also a large portion of Math and Science majors in every category for the Gallup poll question, whom I can assume are well educated about science. In this case, the idea that having a religious association lowers one’s level of scientific knowledge seems to be less evident. However, I do not have a large non-religious group to compare these results to, so I am limited in what I can extrapolate from this information.

This brings the discussion back to the two main factors that influence one’s acceptance of evolution: religion and level of education. Initially, I hypothesized that, since the population from which I sampled is in the age bracket of 18-29 and has at least some college education, both of which are factors shown to result in a higher acceptance of evolution (“Public’s Views on Human Evolution”), the results of the Gallup poll question in my survey might be comparable to the results of the actual Gallup poll from 2017. However, when taking into account the extensive religious affiliation shown in my sample and at Malone in general, it makes sense that there is a much higher belief in a creationist view in my results than in the 2017 Gallup poll results. These two prominent factors seem to persuade one’s view of evolution in contrasting ways, but one is more dominant than the other. Because of the large percentage of

those who hold to a creationist view at Malone, adhering to a particular religion outweighs the influence of being a young adult who has a college education.

Although this topic is not researched as much in smaller, educational populations such as universities, a study similar to my current research was conducted at two public universities in Arkansas (Bland and Hall): Arkansas Tech University and University of Central Arkansas. In this study, a pre-test and a post-test survey were given to students taking a freshman biology course in order to find which demographics may have influenced their view and acceptance of evolution. A scale, called the Measure of the Acceptance of the Theory of Evolution (MATE), was used to calculate the acceptance of evolution, and a wide variety of questions concerning religious practice, education, demographic information, and evolutionary theory were included in the pre- and post-tests.

There were two similar conclusions that were observed in my survey as well as their study. The first is that those in science-related majors are more readily accepting of evolution. In Bland and Hall's pre-test, biology majors were significantly more accepting of evolution than non-biology majors (Bland and Hall 5). In my survey, 31% of those in the Malone Math & Science department answered with "God created humans in the present form within the past 10,000 years." In contrast, 51% of those in the Math & Science department responded with "Humans evolved, God guided the process." Additionally, both participants who answered "Humans evolved, God had no part in the process" were in the Math & Science department as well. Even though the two groups that agree that

humans evolved in some way do have some differences in the core belief, both groups accept evolution as the main mechanism for human development.

The other conclusion that was shared between my research and Bland and Hall's study was that those who identify as Baptist are less likely to accept evolutionary theory. This similarity is not surprising considering that the denial of evolution is part of the Baptist statement of faith, as mentioned before. However, it is intriguing to find another validation of this finding in a study such as mine.

Although the overall goal and certain results of both of these research projects was comparable, it is important to state the differences between the two surveys in order to gain a better perspective of the issue at hand. Bland and Hall's survey was done at two regional universities in Arkansas instead of one Christian liberal arts university and therefore had a much larger population to work with. There were 993 pre-test surveys and 534 post-test surveys completed by those in a freshman biology course as compared to 111 responses to my survey, which was given to the student body as a whole. Another stark difference between the populations that were surveyed is that Malone is strongly associated with the Evangelical Friends Church and has a large population of students with a religious affiliation of some sort, and the other two universities are not associated with a religion and are instead secular. The formatting of the two surveys was also very different, as Bland and Hall's survey had a broader range of questions than mine did. Considering these significant differences, the similar conclusions that were found are, in my opinion, even more notable.

The interviews that were conducted were not the main focus of this thesis, but they provided valuable information that tied together the results from the quantitative data and the individuals' convictions in regard to the broader topic at hand. Along with the themes that emerged from the interviews, which supported my survey results, there were unforeseen positive side-effects for the participants. By gaining personal accounts from the population I was surveying, I was able to open up a discussion that may have demonstrated to the interviewees that this broader conversation is relevant in their lives and that they were able to positively contribute to my data. By examining their own responses and thinking deeper about why they answered a certain way, they may have realized the different ways that this debate affects their worldview and, in most cases, their faith.

From these interviews, it is clear that the views of students at Malone about evolution and human origins are affected in both compelling and subtle ways. The fact that every participant who was interviewed noted the importance of gaining a variety of perspectives about this topic is a testament to the faith integration that has occurred and should continue to occur at Malone. Because this issue seems to matter to at least some of its students, I believe that Malone should continue to be a place where conversations about controversial topics, such as creationism and evolution, can be fostered.

Additionally, part of what is beneficial about having more conversations about creationism, evolution and related subjects, as mentioned by those that

were interviewed, is not only understanding what others believe, but understanding their own stance. Realizing that their worldview differs from others' views inside of Malone's community *and* from national views, as well as what factors greatly influence how they perceive creationism and evolution are valuable to personal growth and interpersonal interactions. This study contributes to those who took the survey, Malone's student population as a whole, and the large area of research being done on a national scale, as seen in Bland and Hall's survey. In the future, the quantitative and qualitative data collected by this thesis may be used in comparative case studies from other universities.

Limitations

Potential limitations of this study include the limited sample size that took the survey and the small population at Malone. The distribution and representation of certain majors and departments within this study are not fully in line with the number of majors at Malone in total. The departments that were notably overrepresented in my survey were Bible & Theology; Math & Science; History, Philosophy, & Social Science; and Social Work. The departments that were noticeably underrepresented were Business and Nursing & Health Science. The fact that Malone is a religious school may have also influenced the participants to answer in a way that would reflect that. Because of this, another possible limitation is the fact that the survey participants may have biased answers.

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Appendix A: Survey Questions

- I am 18 years of age or over and consent to take part.
- By completing and submitting the survey on Google Forms, you are giving your permission for your survey responses to be included in my analysis of the data.
- How do you see science and religion interacting based on these 4 views?
- Which of the following statements comes closest to your views on the origin and development of human beings?
- Briefly explain the reasoning for your answer to the previous question about human origin and development.
- What type of education have you received prior to coming to Malone?
(choose all that apply)
- What is your religious affiliation if any?
- Are you a first generation college student?
- How many years have you studied at Malone?
- What is your current major?
- Approximately how many science classes have you taken throughout your high school and college education?
- Approximately how many theology/bible classes have you taken throughout your high school and college education?

- I would like to follow-up with some survey participants with a brief interview. Would you be willing to be contacted to answer a few questions about the topic of this survey?
- If you answered "Yes" to the previous question, what is the best way to contact you (e.g. phone, email)?
- To be entered in a drawing for a \$25 gift card, email Dr. Karyn Collie (kcollie@malone.edu) with the subject line "Took survey;enter drawing." You will still be anonymous if you choose to enter the drawing and your email address will not be connected to your survey responses.

Appendix B: Interview Questions

- Do you think that this issue is important to discuss, especially here at Malone?
- Do the questions in the survey you took regarding human origins matter to you personally?
- What kind of conflict, if any, have you experienced in the past that relate to this topic?
- Have you changed your view on human origins since coming to Malone?
- How familiar are you with these terms: creationism, Intelligent Design, evolution?
- Further explain the answers that you gave in your survey.

Appendix C: Results from the Survey

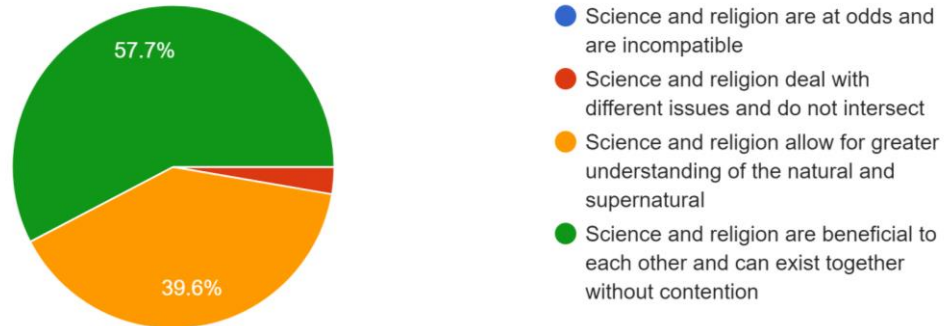


Fig. 1 Percentage of participants' answers for "How do you see science and religion interacting based on these 4 views?"

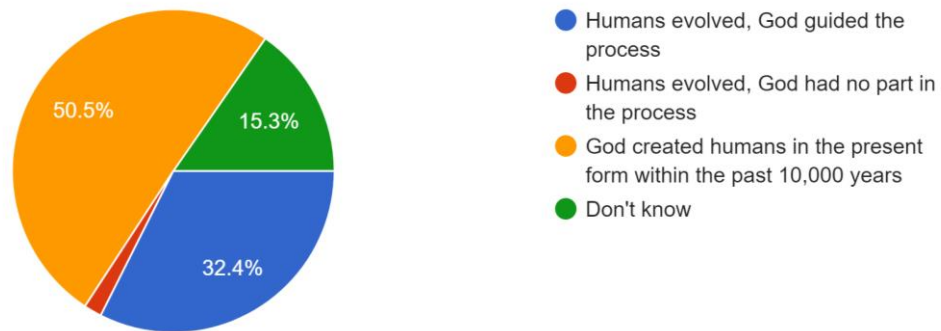


Fig. 2 Percentage of participants' answers to "Which of the following statements comes closest to your views on the origin and development?"

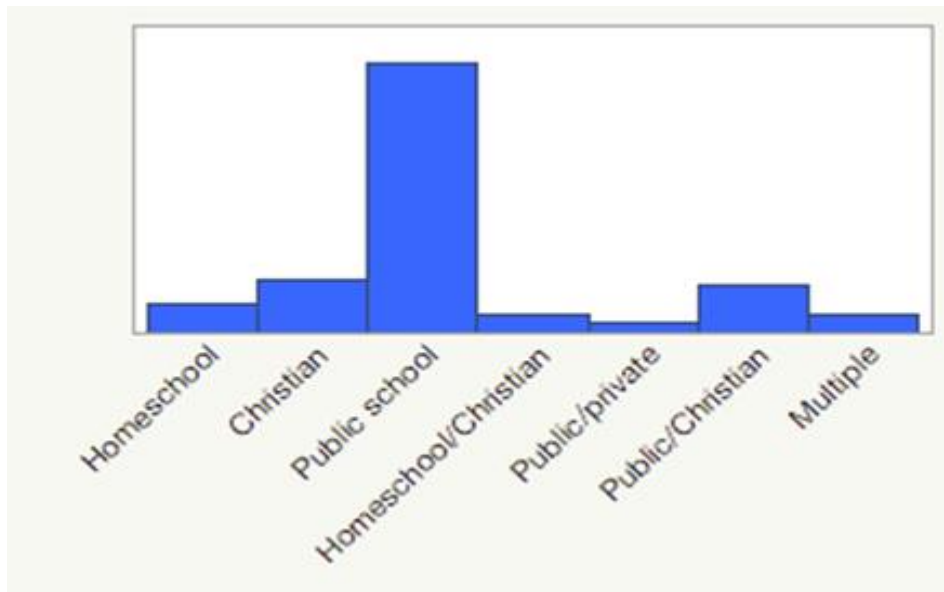


Fig. 3 Distribution of participants' answers for "What type of education have you received prior to coming to Malone?"

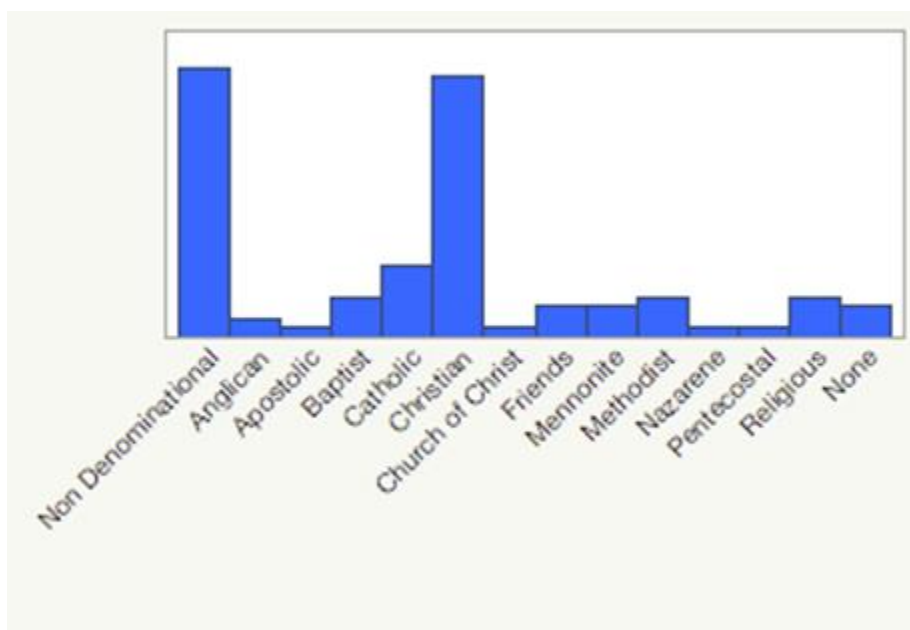


Fig. 4 Distribution of participants' answers for "What is your religious affiliation, if any?"

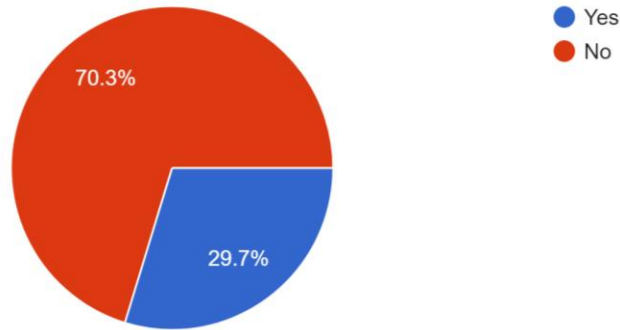


Fig. 5 Percentage of participants who answered “Are you a first generation college student?”

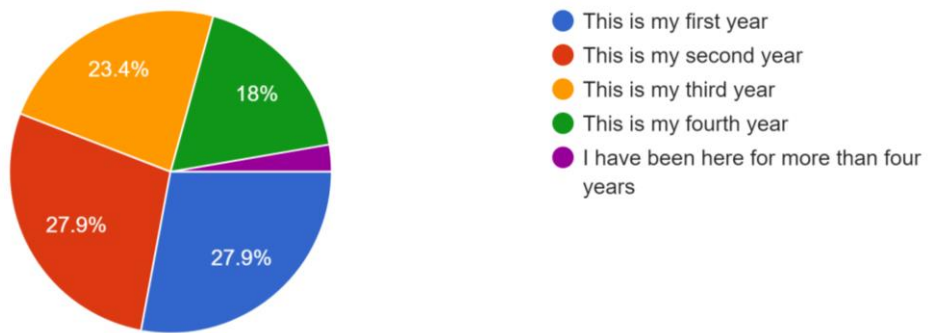


Fig. 6 Percentage of participants' answers for “How many years have you studied at Malone?”

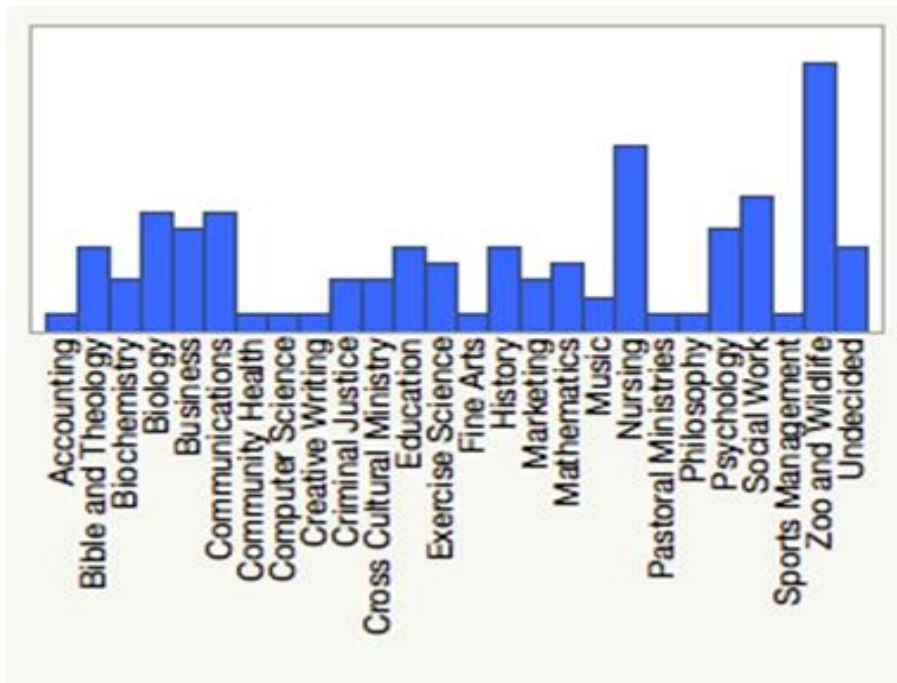


Fig. 7 Distribution of survey participants who answered “What is your current major?”

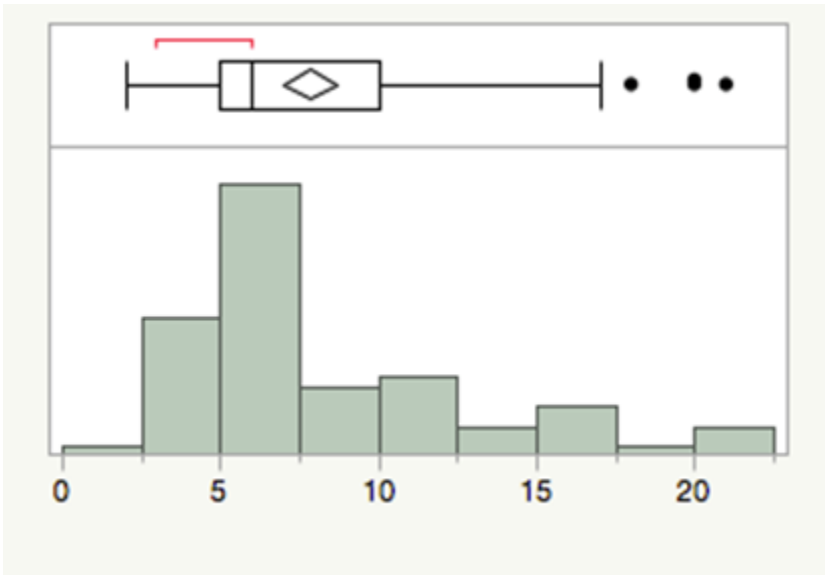


Fig. 8 Distribution of the participants' answers to the question "Approximately how many science classes have you taken throughout your high school and college education?"

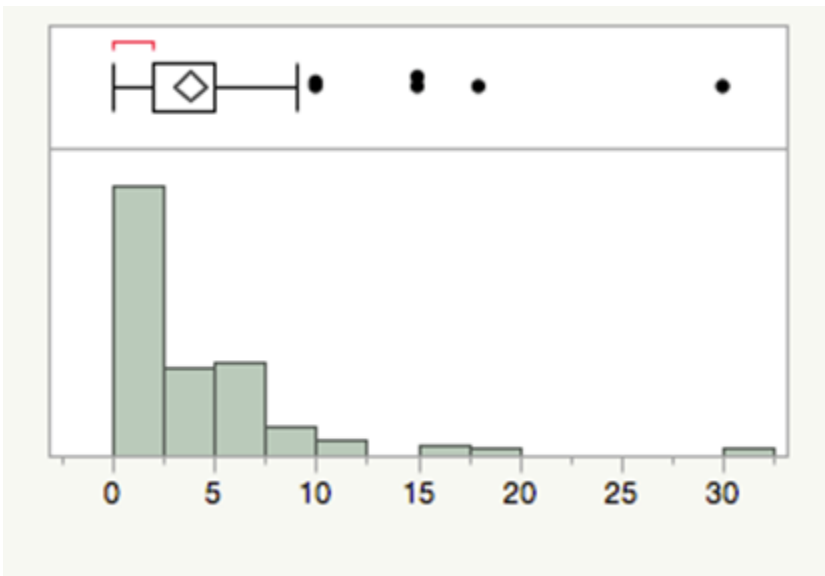


Fig. 9 Distribution of the participants' answers to the question "Approximately how many theology/bible classes have you taken throughout your high school and college education?"

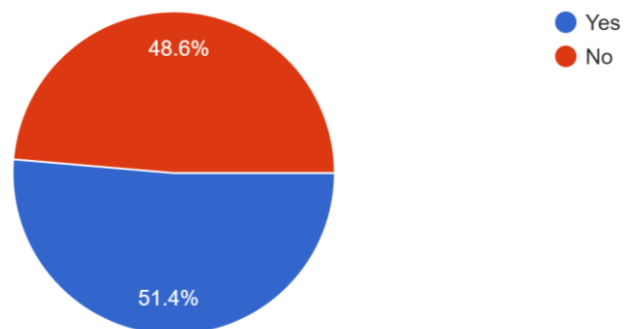


Fig. 10 Percentage of participants' answers to "Would you be willing to be contacted to answer a few questions about the topic of this survey?"