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Effects of Religious and Science Identity on Compatibility

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EFFECTS OF RELIGIOUS AND SCIENCE IDENTITY ON COMPATIBILITY

by

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ABSTRACT

Science and religion sometimes appear to clash; for example, some religious organizations reject COVID-19 restrictions on religious grounds. However, many people, like millions of religious scientists, see science and religion as perfectly compatible. The purpose of this study is to examine how people who identify as religious and people who identify as scientists think about science and religion as either compatible or in conflict. The study was conducted with psychology and honors undergraduate students at the University of Maine and consisted of surveys asking about students' religious and science commitment, as well as their perceptions of the science-religion relationship. We hypothesized and found that UMaine students higher in religious commitment saw science and religion as more compatible, whereas people higher in commitment to science saw science and religion as more in conflict. We also investigated differences between Honors and Non-Honors students, finding that students in the UMaine Honors program were more likely to both have a stronger science identity and see science and religion as more in conflict as compared to the Non-Honors group, which saw them as more compatible.

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INTRODUCTION

Science and religion greatly impact how people act in their daily lives and interpret the world around them, including anything from explaining what happens after we die to how illness affects our bodies. Science and religion also overlap for many people so that they can build on what they know through explaining what they have yet to discover, like in the case of how the universe started or the afterlife. However, these domains can also be seen as in conflict throughout history; for example, Galileo's trial for the heresy of heliocentrism. Why people perceive the science-religion relationship as either compatible or in conflict is a topic which has been speculated on many times, oftentimes with people blaming religious groups for denying science (see Rios, 2020) This seems strange, however, since there are millions of religious scientists both now and in the past who have seen no conflict between their religious beliefs and scientific pursuits. So, what actually affects how people perceive the science-religion relationship, and how can these factors be used to promote a more compatible framework?

Based on the assumption of incompatibility between science and religion (Rios, 2020), some psychologists have investigated whether scientific and religious thinking operate by different cognitive processes. Gervais and Norenzayan (2012) used a dual-process model of cognition, which suggests that some processes are effortful and analytic, and some processes are more automatic and intuitive, to determine what cognitive processes can affect religious belief in participants. They hypothesized that analytic thinking would be associated with less belief in God. Through five studies, they found that there was a consistent negative association between analytic thinking and belief in God, suggesting that certain kinds of thinking, namely scientific or analytic

thinking, may be incompatible with belief in God. Relatedly, Shenhav et al. (2012) attempted to determine whether participants' belief in God was able to be determined by having either an intuitive or a reflective cognitive style. In three studies they found that participants who displayed more intuitive thinking also had a stronger belief in God, while participants who showed greater reflection had a weaker belief in God, which is similar to the findings in Gervais and Norenzayan (2012). These studies were designed with the assumption that science and religion are in conflict and suggest a disconnect between scientific and analytic thinking and religious belief.

Although these studies show a relationship between analytical thinking and science, as well as intuitive thinking and religion, they also reflect underlying biases against religious individuals within the study of science and religion that are important to consider. This is consistent with the findings in Rios (2020), which demonstrated how stereotypes about Christians' performance in science can negatively affect the performance of Christian participants in science-related tasks. By basing their hypotheses and methods on the assumption that religious thinking is intuitive and less analytical, and thus potentially incompatible with more analytical scientific thinking, these studies may have created the differences between science and religion that they expected to find.

Fern Elsdon-Baker (2015) articulated the problem clearly - scientists who are testing the relationship between science and religion are framing their questions in a way that either assumes or forces incompatibility. She utilized four polls conducted internationally between 2008 and 2013 to examine how the framing of creationism and evolutionism in these kinds of surveys can create the illusion of a conflict existing between religious and evolutionary beliefs. She found that polls often used non-inclusive

language, which labeled more people as anti-evolution than actually are (offering only an overly-simplistic binary choice of one believes in evolutionary science *or* a God), assumed Christian framing over neutral or other religions (lumping Muslims and Christians together as creationists for any religious rejection of evolution), used language unfamiliar to participants (respondents identifying as creationists because they believe in a creator as opposed to being against evolution), and didn't allow for more variation in responses other than agreeing or disagreeing with the points addressed in questions (only allowing participants to agree or disagree with broad topics such as evolution). With these analyses, Elsdon-Baker (2015) argued that researchers must put their own biases aside to create measures that are accurate reflections of people's views of the science-religion relationship. Based on her findings, we can assume that science and religion aren't necessarily as incompatible as many have assumed over time, but rather that scientists' recent assumptions about their incompatibility have influenced the scientific findings to see a more conflicting nature.

Consistent with Elsdon-Baker's critique, other studies suggested greater compatibility between science and religion; for example, findings that humans use both natural and supernatural explanations to explain how different phenomena interact with one another. Legare and Gelman (2008) conducted three studies of Sesotho-speaking South African communities to investigate how natural and supernatural explanations for illness and disease transmission (involving several illnesses including AIDS) can coexist. They found that participants held both supernatural and biological explanations simultaneously, and that bewitchment explanations were not just a default framework for when biological explanations were lacking. In short, religion is not a replacement for

scientific ignorance. Rather, these domains are held simultaneously but explain different aspects of life in different ways (e.g., how we die and where we go after death).

To further understand why individuals perceiving science and religion as more compatible may be more common than previously thought, Legare et al. (2012) examined why people may combine both natural and supernatural explanations to understand different aspects of their lives. An example of this could be explaining the creation of life, with theology being used to explain the origins of humanity and evolution explaining the origin of other, non-human species. They further pointed out that both science and religion can explain what happens when we die, with biology explaining how people die and theology explaining what happens to souls after death. These explanations help give insight into how people rationalize the relationship between science and religion in their daily lives, thus providing evidence for the compatibility perspective being more common than previously expected. This suggests that in the context of everyday thinking, people find science and religion compatible.

Beyond these anthropological studies, recent research suggests that religious people tend to see the science-religion relationship as more compatible as opposed to non-religious people, who are more likely to see the relationship as one of conflict. Sharp and Leicht (2020) and Leicht et al. (2021) developed a scale to measure people's perceptions of the science-religion relationship. In their review of the relevant literature, Sharp and Leicht (2020) found that atheists and non-religious/agnostics are more likely than religious people to see science and religion as in conflict, which may indicate that those who are exposed to both religious and scientific teachings may have a more

compatible perception of the science-religion relationship. This suggests that non-religious scientists appear to have the most conflicting view of science and religion.

Leicht et al. (2021) aimed to address the gap in knowledge about how individuals perceive the science-religion relationship in their everyday lives by creating a scale for perceptions of conflict and compatibility in different domains of knowledge. Through three studies in the UK and Canada, they found two distinct domains for compatibility – one concerning questions about origins and endings of human life, and the other about how humans should interact with the world around them. They found that participants reported more conflict between science and religion regarding explanations for things like the origins of human life than in areas such as treating disease. They also found that religious participants generally saw science and religion as more compatible than non-religious participants. These results do not appear to support the conflict narrative between science and religion, as they indicate that people who are more religious are not struggling to mediate any perceived conflict between science and religion, but instead, that people high in science and low in religion may be the drivers of this conflict. Notably, the positive effect of religiousness on compatibility was strongest for those who were also high in science identity. This may indicate that the stronger one's identity is in both areas (science and religion), the more likely it is that they see those domains as compatible.

Perceptions of conflict held by scientists can represent a serious problem with representation in scientific careers. Recent studies have addressed the consequences that the perception of conflict between science and religion can potentially have for religious people in science. Rios (2020) demonstrated how being reminded of Christianity-science

conflict stereotypes has the potential to affect the performance of Christian participants in science-related tasks, and whether these changes in performance are due to stereotype threat or disengagement. The study found that Christians performed just as well as non-Christians on scientific reasoning tasks when told that most people view science and Christianity as compatible, but showed poorer scientific performance and a greater feeling of stereotype threat than non-Christians when told that science and Christianity conflict with one another. This could result in fewer Christians in scientific settings and inadvertently reinforce the stereotype through their lack of representation in those spaces. What can be done to help scientists see science and religion as compatible and why should they be convinced to consider compatibility?

The inaccurate assumption that science and religion are in conflict has consequences for not only religious individuals in science, but also for everyone when it comes to topics like public health, school education, and more. Since there is prejudice against Christians in science, the research isn't as diverse and inclusive as possible, which leaves gaps in data and the kinds of questions that researchers may choose to ask. A more compatible view of science and religion among scientists may help develop research that would improve public health (e.g., interventions for vaccine hesitancy or communication about sexual and reproductive health). One potential intervention point is education. If people high in science identity are developing the view that science and religion are incompatible, then they must be learning that perspective somewhere. Perhaps it can be unlearned through education.

Education is one context with the potential to promote the conflict narrative or deconstruct it. Longest and Smith (2011) aimed to understand the different factors that

influence which of four primary viewpoints (conflict, independence, dialogue, and integration) that emerging US adults hold regarding the science-religion relationship. The data for this study was gathered from the National Study of Youth and Religion (NSYR), which is a nationally representative longitudinal telephone survey. This survey conducted phone interviews with teens in 2002-2003 and then again with the now-adults in 2007. In the follow-up, all respondents were between 18 and 23. Denomination, religious behavior, spirituality, and participants' views of the science-religion relationship were measured. They found that high religiosity increased the likelihood that participants felt science and religion were compatible and not in conflict. Further, participants attending a Protestant high school were among the highest endorsers of the integration perspective, since participants felt that their faith was strengthened by understanding science. This may be an indication that being exposed to both religious and scientific curricula may cause students to see the disciplines as more compatible, especially if they are taught to be integrated with one another.

The effects of education on students' perceptions of the conflict narrative were examined in a more recent study by Pearce et al. (2019), who conducted a study involving 40 students across 6 secondary schools in England with the goal of recording their perceptions of the science-religion relationship. Pre and post interviews were utilized to examine the students' perceptions, with intervention classes in between that were designed to have students critically reflect on the science-religion relationship. These classes consisted of six Religious Education lessons and six Biology lessons, which engaged students through a variety of means ranging from written dialogue to debate-style discussions. In the interviews, students were asked several questions

regarding their opinions on science, religion, whether they have anything in common, whether they believe that people who believe in evolution don't believe in God, and whether they would support alternative viewpoints (creationism and life after death) being taught alongside science in science classrooms.

Pearce et al. (2019) reported that, of the 40 students interviewed, 16 did not change their views on the science-religion relationship, with 12 of these students maintaining that science and religion are incompatible because of their views on the origin of the universe, so disagreement was inevitable. 21 out of the 40 total students changed their views on the science-religion relationship, with 18 of the 21 changing from thinking the relationship is incompatible to not incompatible. Further, 5 out of the total 40 students changed their views from conflict to compatibility and 3 out of 40 changed from compatibility to conflict. 24 out of 40 students believed that the common ground between religion and science was evidence for a compatible relationship, while 16 out of 40 students found it to be cause for incompatibility. Although this study is a small-scale test of educational intervention, the results suggest that education may have a significant influence on students' perceptions of compatibility between science and religion.

Scheitle (2011) similarly conducted a longitudinal study to demonstrate how college students' perceptions of the science-religion relationship change over the course of three years in their undergraduate career, separating students by degree to account for curricula. He examined the association between students' religiosity, field of study, and view of the science-religion relationship using data gathered from the Spirituality in Higher Education Project (SHEP), which is a nationally representative survey of undergraduates.

In this study, Scheitle (2011) conceptualized the science-religion relationship in four categories. A person who endorses the (1) pro-religion conflict perspective finds science and religion to be in conflict and they favor religion. Likewise, the (2) pro-science conflict perspective suggests conflict favoring science Whereas the (3) independent perspective suggests they do not interact, and the (4) compatible perspective suggests they cooperate to discover truth.

As reported by Scheitle (2011), of those who held a pro-religion conflict perspective in their freshman year, slightly over 70% changed their views to independence or collaboration in their junior year. Of the participants who held a pro-science conflict perspective in their freshman year, 45.9% held the independence or collaboration perspective in their junior year. This data indicates that, as students are exposed to a college setting, their views shift from seeing science and religion as in conflict to seeing them as either independent or compatible with one another. Pro-religion conflict students appear to be more likely to alter their perspective than pro-science conflict students, potentially indicating that pro-science conflicts are harder to resolve or are held tighter by those who have them.

Scheitle (2011) also reported that very few students change from holding an independence or collaboration view to a conflict view (2.3% switching from pro-religion to pro-science and 1.6% switching from pro-science to pro-religion), further demonstrating the idea that college has an impact on students' perceptions of science and religion, pushing them more towards compatibility. However, it was also found that scientists and engineers are the most likely to hold the pro-science conflict perspective, future educators are among the most likely to hold a pro-religion conflict perspective, and

students in the Arts and Humanities were the most likely to hold an independence/collaboration view. This is consistent with Longest & Smith (2011) and Leicht et al. (2021) in that those with a more scientific identity hold a more conflicting narrative. This suggests that education in certain domains (i.e., non-science) may be more effective at highlighting compatibility between science and religion. Overall, it was found that most undergraduates did not hold a conflict perspective, regardless of their level of religiosity. So how does an undergraduate curriculum influence perceptions of science and religion compatibility?

In this study, we investigate the relationship between science and religious identities and perceptions of conflict between science and religion, specifically within the curriculum at the University of Maine. We hypothesize that students who participate in the Honors curriculum, which notably discusses both science and religion in its core classes, will see science and religion as more compatible than those who are in a more traditional, less-integrated curriculum. Further, consistent with the limited previous research, we predict that students with a higher science commitment will see science and religion as more in conflict, and students with a higher religious commitment will see them as more compatible.

METHODS

Participants and Recruitment

A total sample of *N = 246* was collected from the University of Maine classes HON 112 (first-year honors students; *n = 140*) and PSY 100 (from the participant pool; *n = 106*) at two time points in Spring 2020. Students were recruited at the start of the Spring 2020 semester via email. After excluding missing data and removing participants who only completed time two, the sample for the relevant analyses is *n = 209* (M_{age} = 18.83; Age Range 17-27; 36.6% male, 59.9% female, 2.3% genderqueer, 1.2% other gender identity; 88.1% White/Caucasion, 3.2% Asian/Pacific Islander, 2.2% Native American, 3.2% Hispanic, 1.6% Black/African American, 1.6% Other; 43.1% Non-Honors, 56.9% Honors).

Participants were contacted to participate again at the end of the Spring semester. However, we unfortunately had significant attrition, leaving only *n = 63* Honors students and *n = 21* Non-Honors students with data from both time points. Since the follow-up sample was subject to so much attrition, it would be inappropriate to draw conclusions from them, thus they are not presented in this work.

Materials and Procedure

Participants were asked to complete an online survey at the beginning and end of the Spring 2020 semester. Survey 1 was sent to all Honors participants via the email feature provided by Qualtrics survey tool at the beginning of the Spring 2020 semester. Non-Honors participants signed up to participate as a part of their experience in Introductory Psychology. Clicking the link directed participants to a survey powered by

Qualtrics, which is a web-based survey software used by the University of Maine. Before beginning the survey, participants were presented with the informed consent (please see Appendix B for survey materials). Participants were not able to proceed with the survey unless they agreed to participate. Participants were then asked if they were a student in the Honors College. Following these preliminary questions, students were directed to the survey questions (see below of descriptions of all measures).

Measures

Although several measures were collected, this manuscript focuses on 3 specific constructs: Science and Religion Compatibility (Leicht, Sharp, LaBouff & Baker, 2021), The Religious Commitment Inventory (RCI-10; Worthington, et al, 2003), a modified version of The Religious Commitment Inventory to measure commitment, and Religious and Science Identity and Importance.

Science and Religion Compatibility (Leicht et al., 2021)

Participants were asked 8 questions about their perceptions of science and religion being either in conflict or compatible across different domains including the origins of the universe and how humans get sick on a 1 (completely in conflict) to 7 (completely compatible) Likert scale. An example item is, "Explaining what happens at the end of life."

Participants were also asked 3 open-ended questions about their perceived conflict and compatibility of science and religion[1]. The open-ended questions are as follows:

[1] This data was not analyzed for the present work.

1. Do you see science and religion as primarily IN CONFLICT or primarily COMPATIBLE? Why?
2. In what ways, if any, do you see science and religion as most COMPATIBLE?
3. In what ways, if any, do you see science and religion as most IN CONFLICT?

The Religious Commitment – RCI-10 (RCI-10; Worthington, et al, 2003)

This inventory uses a 1-7 Likert scale to measure the degree of adherence to one's religious values and the extent to which one uses them in daily life. An example item is, "My religious beliefs lie behind my whole approach to life." We created an alternative "science" version of the Religion Commitment Inventory by altering "religion" on the terms to "science" – for example, "Science lies behind my whole approach to life."

Religious and Science Identity and Importance

Participants were asked questions about their religious identity (i.e., Which of these best describes your beliefs – theist, agnostic, atheist, other; How CERTAIN are you in your belief or non-belief; Which best describes your religious identity – Christianity, Judaism, Islam, etc.; and How important is your religious or non-religious identity to you). Participants were also asked similar questions regarding their science identity (i.e., Which of these best describes you – scientist or non-scientist; I identify as a scientist – 1 = strongly disagree, 7 = strongly agree; and How important is your identity as a scientist or a non-scientist to you?).

RESULTS

Overall, participants reported low religiosity (M = 2.73, SD = 2.32) and that religion was unimportant to their self-concept (M = 1.57, SD = .87; see Table 1 for means and correlations for full sample).

As expected, measures of religiosity were strongly correlated with one another (i.e. religious commitment index and religious identity, r = .88 p < .001), as were the science commitment measures (i.e. science commitment index and science identity, r = .62 p < .001). Although people who were more committed to science were less committed to religion (as measured by the RCI and adapted SCI, r = -.20 p = .008), their self-reported identification as religious was not associated with their self-reported identification as a scientist (r = -.04 p = .575). Religious commitment was also associated with more compatible perceptions of the science religion relationship (r = .43 p < .001) while science identities, especially science commitment, were more associated with conflicting perceptions of science and religion (r = -.29 p < .001).

Table 1
Descriptives and Correlations at Time 1 for Full Sample

Variable	1	2	3	4	5	6	7	M	SD
1. To What Extent Rel Person	--							2.73	2.32
2. Religious Commitment	.88**	--						1.57	.87
3. Science Identity	-.04	-.01	--					4.00	2.12
4. Scientific Commitment	-.28**	-.20**	.62**	--				2.73	1.05
5. CSRS Total	.48**	.43**	-.10	-.29**	--			3.31	1.46
6. CSRS Explain	.43**	.36**	-.13	-.32**	.92**	--		2.82	1.65
7. CSRS Human World	.45**	.42**	-.06	-.22**	.91**	.66**	--	2.81	1.56

Note. *p < .05; **p < .01

When controlling for science commitment, it was found that religious commitment was significantly, positively associated with compatibility (B = .39 p < .001). When controlling for religious commitment, science commitment was significantly, negatively associated with compatibility (B = -.20 p = .004).

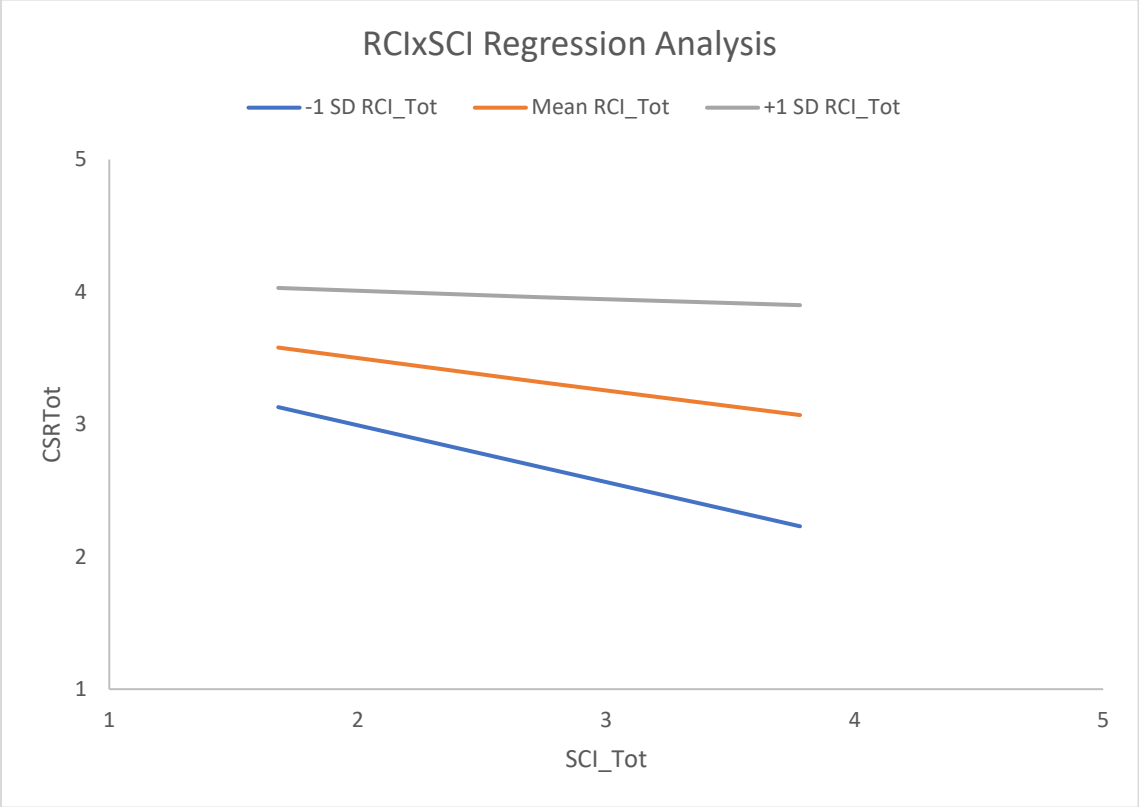
The interaction between religious and science commitment was not significant (B = .11 p = .139). Both the main effect of religious commitment and science commitment remained significant (RCI B = .44 p <.001; SCI B = -.18 p = .014). This means that whether religiosity is high or low, increased science commitment is associated with a decrease in compatibility.

Table 2
Multiple Regression of Science and Religious Commitment on Compatibility

	β	t	p	R^2	Sig. F change
Step One				.215	.004**
Religious Commitment (C_RCI)	.388	5.629	<.001**		
Science Commitment (C_SCI)	-.204	-2.954	.004**		
Step Two				.221	.139
Religious Commitment (C_RCI)	.439	5.720	<.001**		
Science Commitment (C_SCI)	-.177	-2.482	.014*		
Interaction (RCIxSCI)	.113	1.485	.139		

Note: *p < .05, ** p < .01

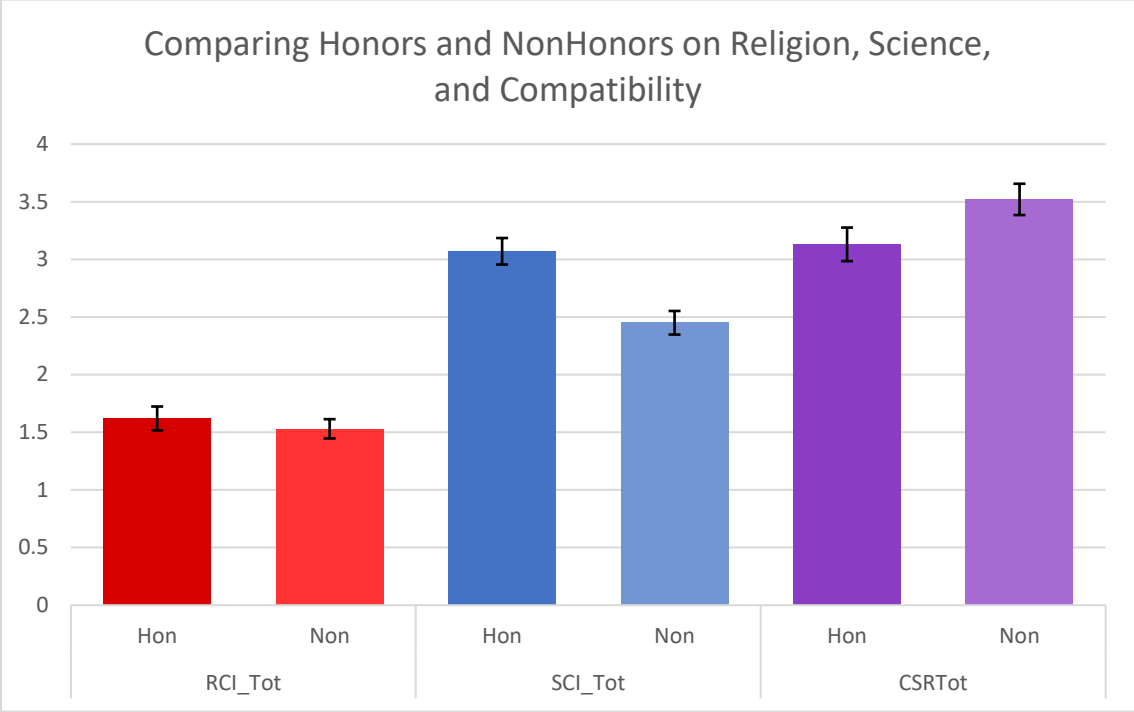
Figure 1
RCIxSCI Regression Analysis



There was no reliable difference between Honors and Non-Honors Students on their religiosity (Mhon = 1.62, SD = .93; Mnon = 1.53, SD = .81; t = -.72; p = .474). Honors students were more likely to endorse a scientific identity (Mhon = 3.07, SD = 1.03; Mnon = 2.45, SD = 1.00; t = -4.04; p < .001). Honors students were marginally more likely to see science and religion as in conflict than Non-Honors students (Mhon = 3.13 SD = 1.54; Mnon = 3.52, SD = 1.34; t = 1.96; p = .052).

Figure 2

Comparing Honors and Non-Honors on Religion, Science, and Compatibility



DISCUSSION

In this study we found that in a relatively irreligious sample, having a stronger commitment to one's religious identity predicted the perception that science and religion are compatible, whereas having a stronger commitment to one's scientific identity predicted the opposite. These main effects persisted even when people high in science identity were also religious, and vice-versa. We further found that students participating in the Honors program were more likely to see science and religion as in conflict, as compared to the Non-Honors group, which saw them as more compatible.

Our data supports previous findings that those with a science identity viewed science and religion as more in conflict with one another, and that those with high religious identities found science and religion as more compatible (Scheitle, 2011; Longest & Smith, 2011; Sharp and Leicht, 2020; Leicht et al., 2021). However, our data was inconsistent with the finding in Leicht et al. (2021), which states that those who identified with religion saw more compatibility only if they also identified with science. Our data indicates that as science identity increases, then compatibility decreases regardless of religion, whereas Leicht et al. (2021) indicates there is a more direct relationship between science and religious identity. This could potentially be because our sample was particularly irreligious, with a lack of more religious participants potentially being responsible for removing the relationship that Leicht et al. (2021) sees. However, consistent with Elsdon-Baker (2015), our study does demonstrate that, when represented appropriately, religious people tend not to find religion and science as in conflict as much as previously thought.

Our results suggest that religious people use science as a way to support their religious beliefs, while scientific people do not create this same connection between science and religion. By finding a way for science to fit into their religious beliefs, religious people are able to see science and religion as more compatible. This then allows them to mediate any divide that may be found between the disciplines, as seen in this student response:

> "I say they are primarily compatible, I for one love science and hope to pursue a career in science and I am also a Catholic. I personally believe they are connected and for some people that may seem out of the box but I truly believe that a-lot can be explained by science but it is all heavily tied into and stemmed from religion."

Although we did not systematically analyze the qualitative responses, this response suggests that some participants do hold this belief in the integration of science and religion.

When considering the information about the impact of curriculum on students' perceptions of the science-religion relationship and the results of this study, there are implications for the curriculum of the Honors College at the University of Maine. Namely, the results suggest that Honors students have a higher science identity and more perceptions of conflict than Non-Honors students. This could be because of a higher proportion of science majors in Honors, but based on college demographics, that seems unlikely. However, because we lack data for the time two study, we cannot say whether this is due to the Honors curriculum or if students with a higher science identity are more likely to join the Honors program, thus associating it with a higher conflict perspective. In future studies, we will investigate the longer-term effects of these potential differences in curricula.

Limitations

It is important when considering the results of this study to note that the sample was particularly irreligious due to the state and university being culturally nonreligious. This means that we did not have the opportunity to effectively examine the perceptions of those with a strong religious identity, but we did have access to participants with stronger scientific identities, which leaves room for investigation in more highly-religious contexts. However, because our sample was already very irreligious, students who were one standard deviation below the mean were *especially* irreligious, giving us more insight into how people in the extremely irreligious category may feel about the science-religion relationship, and how even moderate levels of personal religiousness are associated with greater perceptions of compatibility.

Further, we received a lack of follow-up responses that would be needed to conduct a longitudinal study, so we were unable to determine the effects of curriculum on students' perceptions over time. This prevented us from drawing conclusions about how different curricula affect students' perceptions of the science-religion relationship and how the Honors College curriculum at UMaine, specifically, affects students' perceptions.

Future Directions

Future research should focus on the effect of curriculum over time through a longitudinal framework. This would allow researchers to fully understand whether the difference in curricula originated from the program itself or if the students in the program were themselves predisposition to their conflict or compatibility viewpoints.

Further, including more majors in the study with a larger sample size would allow for insight into what types of people are seeing the most conflict. This could also potentially inform curricula for general education requirements, as humanity classes may focus partially on the science-religion relationship.

Because this study was conducted in a white, Western, Christian context, future studies may investigate the perceptions of individuals in different contexts to see if the effects are similar.

CONCLUSION

In this study, we found that a stronger commitment to one's religious beliefs was associated with a stronger perception of compatibility in the science-religion relationship, while a stronger science commitment was associated with a stronger perception of conflict. The main effects were consistent even when people high in science were also religious and the other way around. This suggests that religious people may use science to support their religious beliefs, but also suggests that scientific people do not share this connection between science and religion. It was also found that, students participating in the Honors program were more likely to hold a conflict perspective when compared to the Non-Honors group, however due to a lack of time two data, we are unable to determine whether this is due to a difference in curriculum or not.

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APPENDICES

APPENDIX A: IRB Approval

APPLICATION COVER PAGE

- ***KEEP THIS PAGE AS ONE PAGE – DO NOT CHANGE MARGINS/FONTS!!!!!!!!!***
- ***PLEASE SUBMIT THIS PAGE AS WORD DOCUMENT***

APPLICATION FOR APPROVAL OF RESEARCH WITH HUMAN SUBJECTS
Protection of Human Subjects Review Board, 400 Corbett Hall

(Type inside gray areas)

PRINCIPAL INVESTIGATOR:	**Sally Barker**	**EMAIL:**	**sally.barker@maine.edu**
CO-INVESTIGATOR:		**EMAIL:**	
CO-INVESTIGATOR:		**EMAIL:**	
FACULTY SPONSOR:	**Jordan LaBouff**	**EMAIL:**	**Jordan.labouff@maine.edu**
(Required if PI is a student):			
TITLE OF PROJECT:	**Identity and the Religion-Science Relationship**		
START DATE:	**Upon Approval**	**PI DEPARTMENT:**	**Psychology**

STATUS OF PI: FACULTY/STAFF/GRADUATE/UNDERGRADUATE G (F,S,G,U)

If PI is a student, is this research to be performed:

- ☐ **for an honors thesis/senior thesis/capstone?**
- ☐ **for a doctoral dissertation?**
- ☒ **other (specify) Independent research**
- ☐ **for a master's thesis?**
- ☐ **for a course project?**

Submitting the application indicates the principal investigator's agreement to abide by the responsibilities outlined in Section I.E. of the Policies and Procedures for the Protection of Human Subjects.

Faculty Sponsors are responsible for oversight of research conducted by their students. The Faculty Sponsor ensures that he/she has read the application and that the conduct of such research will be in accordance with the University of Maine's Policies and Procedures for the Protection of Human Subjects of Research. REMINDER: if the principal investigator is an undergraduate student, the Faculty Sponsor MUST submit the application to the IRB.

Email this cover page and complete application to UMRIC@maine.edu

****

FOR IRB USE ONLY Application # 2021-04-05 Review (F/E): E Expedited Category:
ACTION TAKEN:

- ☒ **Judged Exempt; category 2 Modifications required? Yes Accepted (date) 4/8/2021**
- ☐ **Approved as submitted. Date of next review: by Degree of Risk:**
- ☐ **Approved pending modifications. Date of next review: by Degree of Risk:**
  Modifications accepted (date):
- ☐ **Not approved (see attached statement)**
- ☐ **Judged not research with human subjects**

FINAL APPROVAL TO BEGIN **4/8/2021**
Date

10/2018

APPENDIX B: Outreach and Survey

Informed Consent Form

You are invited to participate in a research project being conducted by Jordan LaBouff, a faculty member in the Department of Psychology at the University of Maine, and Sally Swanson, a graduate student working with him. The purpose of the research is to understand how students' ideas and beliefs change over time. You must be at least 18 years old to participate.

What Will You Be Asked to Do?

If you decide to participate, you will be asked to answer several questions about yourself, your thoughts, and your beliefs. You will be asked questions like, "I enjoy interacting with people from different cultures", "My religious beliefs lie behind my whole approach to life", and "I am a scientist." By agreeing to participate, you are also agreeing to allow researchers access to your academic record to investigate how academic performance is related to these thoughts and beliefs over time. Then, at the end of the Spring term 2020, we will contact you and invite you to participate in another, similar survey. It may take about 30-40 minutes for each survey.

Risks

Except for your time and inconvenience, there are no additional risks to you from participating in this study.

Benefits

There are no direct benefits to you, although it is hoped the self-reflection required by the questions will be valuable and enjoyable. This research may help us better understand how beliefs and attitudes change across early adulthood.

Compensation

At the end of this survey (and the follow-up survey) you will have the opportunity to enter a raffle for one of 10 $25 prizes. Winners will be drawn when data collection for this wave is complete (no later than Feb 15, 2020) and will be contacted via e-mail to pick up their prize. Probability of winning is approximately 3% if all invited participants complete the study, and increases with fewer participants [Sona participants will also have this sentence included here: "You will also earn one research credit for your participation in this survey. You must reach the finish page of the survey for the system to award you credit."]

Confidentiality

Although you will provide us your name, it will not be on any of the data we analyze or keep. A code number will be used to protect your identity. A key linking your name to the data will be kept separate from the data on a password protected computer using software that provides additional security and will be destroyed when data collection is complete, (no later than 12/31/2021). The raw data from this survey will be kept on the Qualtrics server during data collection, and deleted at the same time as the identifying key. De-identified data will be kept on a password protected computer indefinitely. Only the researchers on this project (Jordan LaBouff and Sally Swanson) will have access to the keyed file. The researchers may post portions or all of the de-

identified data publicly. Your name or other identifying information will not be reported in any publications, presentations, or any context related to the study.

Voluntary

Participation is voluntary. If you choose to take part in this study, you may stop at any time. In order to enter the raffle [and to earn your credit], you must reach the finishing page of the survey. You may skip any questions you do not wish to answer.

Contact Information

If you have any questions about this study, please contact me at Jordan.LaBouff@Maine.edu or call me at 207-581-2826. If you have any questions about your rights as a research participant, please contact the Office of Research Compliance, University of Maine, 207/581-2657 (or e-mail umric@maine.edu).

By clicking Yes below, you indicate that you have read the above information and agree to participate.

___ YES

___ NO

Survey Questions

Start of Block: Conflict

ConfComp To what extent do you PERSONALLY see science and religion as in CONFLICT or as COMPATIBLE in the following areas?

	Completely in Conflict (1)	Mostly in Conflict (2)	Somewhat in Conflict (3)	Neither in Conflict nor Compatible (4)	Somewhat Compatible (5)	Mostly Compatible (6)	Completely Compatible (7)
Explaining the origins of human life (1)	○	○	○	○	○	○	○
Explaining the origins of the universe (2)	○	○	○	○	○	○	○
Explaining the origins of other life excluding human life (3)	○	○	○	○	○	○	○
Explaining what happens at the end of life (4)	○	○	○	○	○	○	○
Treating physical illness (5)	○	○	○	○	○	○	○

Treating mental illness (6)	○	○	○	○	○	○	○
Understanding why humans get sick (7)	○	○	○	○	○	○	○
Informing the relationship between humans and the environment (8)	○	○	○	○	○	○	○

End of Block: Conflict

Start of Block: ConflictCompat Open

OpenConComp Do you see science and religion as primarily IN CONFLICT or primarily COMPATIBLE? Why?

_____

_____

_____

_____

_____

OpenCompat In what ways, if any, do you see science and religion as most COMPATIBLE?

_____

_____

_____

_____

_____

OpenConf In what ways, if any, do you see science and religion as most IN CONFLICT?

_____

_____

_____

_____

_____

End of Block: ConflictCompat Open

Start of Block: Religious Identity

TheistAtheist Which of these best describes your religious beliefs?

- I believe in a god or gods - I am a theist (1)
- I am not sure if I believe in a god or gods - I am an agnostic (2)
- I do not believe in a god or gods - I am an atheist (3)
- Other (4) _____

Display This Question:

If Which of these best describes your religious beliefs? = I believe in a god or gods - I am a theist

Or Which of these best describes your religious beliefs? = I do not believe in a god or gods - I am an atheist

Certainty How CERTAIN are you in your belief or non-belief

- Extremely uncertain (1)
- Uncertain (2)
- Slightly uncertain (3)
- Not certain or uncertain (4)
- Slightly certain (5)
- Certain (6)
- Extremely Certain (7)

ReligID Which of these best describes your religious identity?

- ○ Christianity - Protestant (1)
- ○ Christianity - Catholic (2)
- ○ Christianity - Latter Day Saints (3)
- ○ Judaism (4)
- ○ Islam (5)
- ○ Buddhism (6)
- ○ Hinduism (7)
- ○ Agnosticism (8)
- ○ Atheism (9)
- ○ Other (10) _____

ReligImport How important is your religious or non-religious identity to you?

That is, how important is it to your personal identity to be a Christian, Muslim, Atheist, or Agnostic?

- Extremely unimportant (1)
- Unimportant (2)
- Slightly unimportant (3)
- Neither important nor unimportant (4)
- Slightly important (5)
- Important (6)
- Extremely important (7)

End of Block: Religious Identity

Start of Block: Science Identity

SciID Which of these statements best describes you?

- I am a scientist (1)
- I am not a scientist (2)

SciIDScale I identify as a scientist

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

SciImport How important is your identity as a scientist or non-scientist to you?

That is, how important is it to your personal identity to be a Scientist or a non-Scientist?

- Extremely unimportant (1)
- Unimportant (2)
- Slightly Unimportant (3)
- Neither Important nor Unimportant (4)
- Slightly Important (5)
- Important (6)
- Extremely Important (7)

End of Block: Science Identity

Start of Block: IRI

IRIFull The following statements inquire about your thoughts and feelings in a variety of situations.

For each item, indicate how well it describes you by choosing the appropriate number on the scale: 1 (Does not describe me well) to 7 (Describes me well).
Please read each item carefully.

	1 Does not describe me well (1)	2 (2)	3 (3)	4 (4)	5 (5)	6 (6)	7: Describes me well (7)
I daydream and fantasize, with some regularity, about things that might happen to me. (1)	○	○	○	○	○	○	○
I often have tender, concerned feelings for people less fortunate than me. (2)	○	○	○	○	○	○	○
I sometimes find it difficult to see things from the "other guy's" point of view. (3)	○	○	○	○	○	○	○

Sometimes I don't feel very sorry for other people when they are having problems. (4)	○	○	○	○	○	○	○
I really get involved with the feelings of the characters in a novel. (5)	○	○	○	○	○	○	○
In emergency situations, I feel apprehensive and ill-at-ease (6)	○	○	○	○	○	○	○
I am usually objective when I watch a movie or play, and I don't often get completely caught up in it. (7)	○	○	○	○	○	○	○

I try to look at everybody's side of a disagreement before I make a decision. (8)	○	○	○	○	○	○	○
When I see someone being taken advantage of, I feel kind of protective towards them. (9)	○	○	○	○	○	○	○
I sometimes feel helpless when I am in the middle of a very emotional situation. (10)	○	○	○	○	○	○	○
I sometimes try to understand my friends better by imagining how things look from their perspective (11)	○	○	○	○	○	○	○

Becoming extremely involved in a good book or movie is somewhat rare for me. (12)	○	○	○	○	○	○	○
When I see someone get hurt, I tend to remain calm (13)	○	○	○	○	○	○	○
Other people's misfortunes do not usually disturb me a great deal. (14)	○	○	○	○	○	○	○
If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (15)	○	○	○	○	○	○	○

After seeing a play or movie, I have felt as though I were one of the characters. (16)	○	○	○	○	○	○	○
Being in a tense emotional situation scares me. (17)	○	○	○	○	○	○	○
When I see someone being treated unfairly, I sometimes don't feel very much pity for them. (18)	○	○	○	○	○	○	○
I am usually pretty effective in dealing with emergencies. (19)	○	○	○	○	○	○	○
I am often quite touched by things that I see happen. (20)	○	○	○	○	○	○	○

I believe that there are two sides to every question and try to look at them both. (21)	○	○	○	○	○	○	○
I would describe myself as a pretty soft-hearted person. (22)	○	○	○	○	○	○	○
When I watch a good movie, I can very easily put myself in the place of a leading character. (23)	○	○	○	○	○	○	○
I tend to lose control during emergencies. (24)	○	○	○	○	○	○	○
When I'm upset at someone, I usually try to "put myself in their shoes" for a while. (25)	○	○	○	○	○	○	○

When I am reading an interesting story or novel, I imagine how I would feel if the events in the story were happening to me. (26)	○	○	○	○	○	○	○
When I see someone who badly needs help in an emergency, I go to pieces. (27)	○	○	○	○	○	○	○
Before criticizing somebody, I try to imagine how I would feel if I were in their place. (28)	○	○	○	○	○	○	○

End of Block: IRI

Start of Block: IH

IH Please indicate how much you agree or disagree with the following statements

	Strongly Disagree (1)	Disagree (2)	Neither agree nor disagree (3)	Agree (4)	Strongly agree (5)
I feel small when others disagree with me on topics that are close to my heart. (1)	○	○	○	○	○
When someone contradicts my most important beliefs, it feels like a personal attack. (2)	○	○	○	○	○
When someone disagrees with ideas that are important to me, it feels as though I'm being attacked. (3)	○	○	○	○	○

I tend to feel threatened when others disagree with me on topics that are close to my heart. (4)	○	○	○	○	○
When someone disagrees with ideas that are important to me, it makes me feel insignificant. (5)	○	○	○	○	○
I am open to revising my important beliefs in the face of new information. (6)	○	○	○	○	○
I am willing to change my position on an important issue in the face of good reasons. (7)	○	○	○	○	○
I am willing to change my opinions on the basis of compelling reason. (8)	○	○	○	○	○

I have at times changed opinions that were important to me, when someone showed me I was wrong. (9)	○	○	○	○	○
I'm willing to change my mind once it's made up about an important topic. (10)	○	○	○	○	○
I can respect others, even if I disagree with them in important ways. (11)	○	○	○	○	○
I can have great respect for someone, even when we don't see eye-to-eye on important topics. (12)	○	○	○	○	○

Even when I disagree with others, I can recognize that they have sound points. (13)	○	○	○	○	○
I am willing to hear others out, even if I disagree with them. (14)	○	○	○	○	○
I welcome different ways of thinking about important topics. (15)	○	○	○	○	○
I respect that there are ways of making important decisions that are different from the way I make decisions. (16)	○	○	○	○	○
My ideas are usually better than other people's ideas. (17)	○	○	○	○	○

For the most part, others have more to learn from me than I have to learn from them. (18)	○	○	○	○	○
When I am really confident in a belief, there is very little chance that belief is wrong. (19)	○	○	○	○	○
On important topics, I am not likely to be swayed by the viewpoints of others. (20)	○	○	○	○	○
I'd rather rely on my own knowledge about most topics than turn to others for expertise. (21)	○	○	○	○	○

Listening to perspectives of others seldom changes my important opinions. (22)	○	○	○	○	○

End of Block: IH

Start of Block: Atheist Attitudes

AthEmot When I think about Atheists, I feel...

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Fear (1)	○	○	○	○	○	○	○
Disgust (2)	○	○	○	○	○	○	○
Anger (3)	○	○	○	○	○	○	○
Pity (4)	○	○	○	○	○	○	○
Envy (5)	○	○	○	○	○	○	○
Guilt (6)	○	○	○	○	○	○	○
Distrust (7)	○	○	○	○	○	○	○
Anxiety (8)	○	○	○	○	○	○	○

AthInt How often would you say you interact with someone who is Atheist (e.g., friends, family, co-workers, community members....)

- ○ Never (1)
- ○ Rarely (2)
- ○ Sometimes (3)
- ○ Often (4)
- ○ All of the Time (5)

End of Block: Atheist Attitudes

Start of Block: Muslim Attitudes

MusAtt When I think about Muslims, I feel...

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Fear (1)	○	○	○	○	○	○	○
Disgust (2)	○	○	○	○	○	○	○
Anger (3)	○	○	○	○	○	○	○
Pity (4)	○	○	○	○	○	○	○
Envy (5)	○	○	○	○	○	○	○
Guilt (6)	○	○	○	○	○	○	○
Distrust (7)	○	○	○	○	○	○	○
Anxiety (8)	○	○	○	○	○	○	○

MusCont How often would you say you interact with someone who is Muslim (e.g., friends, family, co-workers, community members....)

- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- All of the Time (5)

End of Block: Muslim Attitudes

Start of Block: Christian Attitudes

ChristAtt When I think about Christians, I feel...

	Strongly Disagree (1)	Disagree (2)	Somewhat Disagree (3)	Neither Agree nor Disagree (4)	Somewhat Agree (5)	Agree (6)	Strongly Agree (7)
Fear (1)	○	○	○	○	○	○	○
Disgust (2)	○	○	○	○	○	○	○
Anger (3)	○	○	○	○	○	○	○
Pity (4)	○	○	○	○	○	○	○
Envy (5)	○	○	○	○	○	○	○
Guilt (6)	○	○	○	○	○	○	○
Distrust (7)	○	○	○	○	○	○	○
Anxiety (8)	○	○	○	○	○	○	○

ChristCont How often would you say you interact with someone who is Christian (e.g., friends, family, co-workers, community members....)

- Never (1)
- Rarely (2)
- Sometimes (3)
- Often (4)
- All of the Time (5)

End of Block: Christian Attitudes

Start of Block: Cultural Competence

CultComp Please indicate how much you agree with or oppose each of the following items.

	Completely Disagree (1)	Somewhat Disagree (2)	Neither Agree nor Disagree (3)	Somewhat Agree (4)	Completely Agree (5)
I feel irritated when people of different religious backgrounds talk about their beliefs with me. (1)	○	○	○	○	○
I feel annoyed when people's different religious beliefs make it difficult for me to communicate with them. (2)	○	○	○	○	○
I get impatient when speaking with people from other religious backgrounds, regardless of how well we can communicate. (3)	○	○	○	○	○

I do not understand why people want to keep their indigenous religious cultural traditions instead of trying to fit into the mainstream. (4)	○	○	○	○	○
I don't understand why people of different religious backgrounds enjoy wearing traditional clothing. (5)	○	○	○	○	○
I enjoy interacting with people from different cultures. (6)	○	○	○	○	○
I am confident that I can socialize with locals in a culture that is unfamiliar to me. (7)	○	○	○	○	○

I am sure I can deal with the stresses if adjusting to a culture that is new to me. (8)	○	○	○	○	○
I enjoy living in cultures that are unfamiliar to me. (9)	○	○	○	○	○
I am confident that I can get accustomed to the shopping conditions in a different culture. (10)	○	○	○	○	○

End of Block: Cultural Competence

Start of Block: RCI

RCI Please indicate the extent to which these statements describe you

	1 - Not at all true of me (1)	2 - Somewhat true of me (2)	3 - Moderately true of me (3)	4 - Mostly true of me (4)	5 - Totally true of me (5)
My religious beliefs lie behind my whole approach to life (1)	○	○	○	○	○
I spend time trying to grow in understanding of my faith (2)	○	○	○	○	○
It is important to me to spend periods of time in private religious thought and relfection (3)	○	○	○	○	○
Religious beliefs influence all my dealings in life (4)	○	○	○	○	○

Religion is especially important to me because it answers many questions about the meaning of life (5)	○	○	○	○	○
I often read books and magazines about my faith (6)	○	○	○	○	○
I enjoy working in the activities of my religious organization (7)	○	○	○	○	○
I enjoy spending time with others of my religious affiliation (8)	○	○	○	○	○
I keep well informed about my local religious group and have some influence in its decisions (9)	○	○	○	○	○

I make financial contributions to my religious organization. (10)	○	○	○	○	○

End of Block: RCI

Start of Block: SCI

SCI Please indicate the extent to which these statements describe you

	1 - Not at all true of me (1)	2 - Somewhat true of me (2)	3 - Moderately true of me (3)	4 - Mostly true of me (4)	5 - Totally true of me (5)
Science lies behind my whole approach to life (1)	○	○	○	○	○
I spend time trying to grow in understanding of science (2)	○	○	○	○	○
It is important to me to spend periods of time in private scientific thought (3)	○	○	○	○	○
Science influences all my dealings in life (4)	○	○	○	○	○
Science is especially important to me because it answers many questions about the meaning of life (5)	○	○	○	○	○

I often read books, magazines, or websites about science (6)	○	○	○	○	○
I enjoy spending time with other scientists (7)	○	○	○	○	○
I make financial contributions to science or scientists. (8)	○	○	○	○	○

End of Block: SCI

Start of Block: Demog

Gender What is your current gender identity? (Select one):

- ○ Male (1)
- ○ Female (2)
- ○ Transgender Male / Trans Man / Female-to-Male (FTM) (4)
- ○ Transgender Female / Trans Woman / Male-to-Female (MTF) (5)
- ○ Genderqueer, neither exclusively male nor female (6)
- ○ Additional Gender Category, please specify (7)
  _____
- ○ Choose not to disclose (3)

SexAB What sex were you assigned at birth on your original birth certificate (check one)

- ○ Male (1)
- ○ Female (2)
- ○ Choose not to disclose (3)

Sexuality Which of the following do you **currently** identify most closely with?

- ○ lesbian, gay, homosexual (1)
- ○ straight, heterosexual (2)
- ○ bisexual (3)
- ○ queer (4)
- ○ questioning/unsure (5)
- ○ something else, please describe (6)

_____

age Age (in years)

_____

year Year in college

- ○ First year (1)
- ○ Sophomore (2)
- ○ Junior (3)
- ○ Senior (4)
- ○ More than 5-years (5)

Ethnicity Ethnicity

- [ ] White/Caucasian (1)
- [ ] Asian/Pacific Islander (2)
- [ ] Native American (3)
- [ ] Hispanic (4)
- [ ] Black/African American (5)
- [ ] Other (6) _____

Ladder Think of this slider as representing where people stand in the United States. On the TOP of the scale (10) are people who are the best off - those with most money, education, and most respected jobs. At the BOTTOM (1) are the people who are the worst off- those with the least money, education, and least respected of jobs or no job.

Where would you place your family as you were growing up on this scale?

Select the number that represents your family.

- ○ 10 (1)
- ○ 9 (2)
- ○ 8 (3)
- ○ 7 (4)
- ○ 6 (5)
- ○ 5 (6)
- ○ 4 (7)
- ○ 3 (8)
- ○ 2 (9)
- ○ 1 (10)

Relig To what extent do you consider yourself a RELIGIOUS person?

- ○ 1 - Not at all (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5- Moderately (5)
- ○ 6 (6)
- ○ 7 (7)
- ○ 8 (8)
- ○ 9 - Extremely (9)

Spirit To what extent do you consider yourself a SPIRITUAL person?

- 1 - Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 - Moderately (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 - Extremely (9)

Politic Please indicate the extent to which you consider yourself politically liberal or conservative

- Extremely Conservative (1)
- Conservative (2)
- Slightly Conservative (3)
- Neutral (4)
- Slightly Liberal (5)
- Liberal (6)
- Extremely Liberal (7)

End of Block: Demog

Start of Block: Contact and Raffle

fname Please enter your FIRST name

_____

lname Please enter your LAST name

_____

email Please enter your preferred e-mail address

_____

Raffle Would you like to enter the raffle for one of ten $25 prizes?

- ○ Yes (1)
- ○ No (2)

End of Block: Contact and Raffle

Recruitment Information

Information E-mail to Honors Students

Hi there, @firstname:

Welcome back to UMaine's Honors College! We are so excited to work and learn with you this term.

This year, we are working to understand how students grow and change as a result of their progress through our curriculum. As a result, we are conducting some research and inviting you to participate in a survey to help us understand people's thoughts and experiences.

If you click the link below, you'll be taken to an online survey. On the first page, you'll get some clear and detailed information about the project, how you can participate, and how to can enter to win one of 20 $25 awards by participating.

This project is really important, so we would greatly appreciate your time in filling out the survey here during the first few weeks of classes while things are starting up. It will take some time (about 30-40 minutes) but you'll help answer important questions, and have the chance to win some cash!

If you participate in this study, you will be contacted via e-mail at the end of the term (Spring 2020) and invited to participate in a follow-up study which will include similar surveys, will take about thirty minutes, and will offer similar opportunities to win cash and will earn a second research credit if you if you choose to participate.

If you have questions, please feel free to reach out to me at Jordan.LaBouff@Maine.edu

[Survey Link]

E-mail to PSY 491 Students

Hi there, @firstname:

Welcome to your capstone course in psychology! We are so excited to work and learn with you this term.

This year, we are working to understand how students grow and change as a result of their progress through our curriculum. As a result, we are conducting some research and inviting you to participate in a survey to help us understand people's thoughts and experiences.

If you click the link below, you'll be taken to an online survey. On the first page, you'll get some clear and detailed information about the project, how you can participate, and how to can enter to win one of 20 $25 awards by participating.

This project is really important, so we would greatly appreciate your time in filling out the survey here during the first few weeks of classes while things are starting up. It will take some time (about 30-40 minutes) but you'll help answer important questions, and have the chance to win some cash!

If you participate in this study, you will be contacted via e-mail at the end of the term (Spring 2020) and invited to participate in a follow-up study which will include similar surveys, will take about thirty minutes, and will offer similar opportunities to win cash and will earn a second research credit if you if you choose to participate.

If you have questions, please feel free to reach out to me at Jordan.LaBouff@Maine.edu

[Survey Link]

Sona Posting

We are working to understand how students grow and change as a result of their progress through our university curriculum. As a result, we are conducting some research and inviting you to participate in a survey to help us understand the experiences of students in our university programs. We will ask you a series of survey questions concerning your beliefs about religion, science, and your attitudes about different groups of people, and other personal factors.

Please note: **If you are a student in the Honors College, you are unfortunately not eligible for this study.**

If you click the link below, you'll be taken to an online survey that will take you about an hour to complete. On the first page, you'll get some clear and detailed information about the project, how you can participate, and how to can enter to win one of 20 total $25 prizes by participating. You will earn one research credit for participating in this online survey.

If you participate in this study, you will be contacted via e-mail at the end of the term (Spring 2020) and invited to participate in a follow-up study which will include similar surveys, will take about thirty minutes, and will offer similar opportunities to win cash and will earn a second research credit if you choose to participate.

Follow-up Recruitment

Hi there, @firstname:

Previously, you were invited to a study about your attitudes and beliefs. As we mentioned then, we are asking participants to answer some additional questions for us at

the end of the term. If you choose to participate, you can be eligible for a raffle for one of 10 more $25 prizes!

If you click the link below, you'll be taken to an online survey. On the first page, you'll get some clear and detailed information about the project, how you can participate, and how to can enter to win one of the $25 prizes by participating.

This project is really important, so we would greatly appreciate your time in filling out this follow-up survey. It will take some time, but you'll help answer important questions, and have the chance to win some cash! [Sona students – you'll also earn an additional research credit]

If you have questions, please feel free to reach out to me at Jordan.LaBouff@Maine.edu

[Survey Link]

AUTHOR'S BIOGRAPHY

Darby C. Casey was born and raised in Bellmawr, New Jersey on April 7, 2000. She graduated from Audubon Jr./Sr. High School in 2018. Darby is a double major in psychology and sociology, with a minor in criminal justice. She is a member of Psi Chi and has received the Steinmetz Book Award, the Richard Ryckman Award, and the Glanville Research Award.

Upon graduation, Darby intends to pursue a graduate degree in forensic psychology.