

# **BLACK PROTESTANT VIEWS OF SCIENCE**

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## **Abstract**

We ask how Black Protestants frame the connection between religion and science, analyzing fifty in-depth interviews with Black Protestants of different socioeconomic backgrounds who attend churches in two U.S. cities. Although individuals across the sample observe some tension, or incompatibility, between religion and science, Black Protestants from lower socioeconomic backgrounds tended to perceive much more tension when compared with those from higher socioeconomic backgrounds. However, when science is thought to contribute to improving health conditions (e.g., medical improvements to diagnose or prevent birth defects), individuals from both SES backgrounds framed religion and science as compatible. This lack of tension in regards to medicine challenges prevailing wisdom about lower-income African Americans' attitudes towards medicine. We draw out the implications of these findings for larger discussions about trust toward science and scientific communities, elucidating Black Protestant particularities and perspectives in tensions between science and religion as a foundation for further research.

**Keywords:** Black Protestants, Science, Evangelicals, Socioeconomic Status, Religion

## **INTRODUCTION**

Social scientists have expressed renewed interest in exploring the relationship between religion, science, and race (Ecklund 2010; Evans 2013; Gauchat 2012; Granger and Price, 2007). Thus far this research has found that theologically conservative White Protestants indicate some conflict with certain scientific issues, such as evolution, and, under certain conditions, a mistrust of scientists (Evans 2013; Ecklund and Scheitle, 2017). Within this line of research, the limited studies that include Black Protestant views indicate that they share a similarly conservative theology. It would follow from

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this that theological conservatism, defined as a religious attitude characterized by demand for absolute doctrine and strict interpretations of the Bible, *could* be a root cause of tension with science among Black Protestants as well as a possible contributing factor to consistently low African American representation in scientific fields (Beasley et al., 2015; Granger and Price, 2007). Yet, because there is such a dearth of research on Black Protestant attitudes towards science, it is hard for researchers to know this for sure.

Missing from studies on science and religion compatibility are in-depth examinations of Black Protestants' understandings of science and more careful assessments of what *specific* scientific issues garner their attention. Our research seeks to elucidate some of the particularities and perspectives about the relationship between science and religion among Black Protestants, providing a foundation for further research. In this paper, we draw on fifty in-depth interviews with Black Protestants of different socioeconomic status (SES) backgrounds in two different regions of the United States. These in-depth interviews provide an ideal way to map a new research agenda by permitting researchers to understand how interlocking racial and religious identities interface with perceptions of science.

Our findings suggest that Black Protestants' perceptions of science map onto those of White Evangelicals who share similar theological viewpoints. Our inclusion of different SES backgrounds permit us to suggest that *class*, rather than race, serves as a more exigent mediating factor in how individual believers framed their views of science. Black Protestants from low SES backgrounds in our sample were more likely than wealthier Black Protestants to see religion and science as incompatible.

However—and quite surprising in light of our expectations—neither SES group mentioned distrust of medical science or the racially discriminatory practices of past science-religion collaborations, such as the Tuskegee trials. This despite their resonance in Black cultural memory (Reverby 2001). Instead, Black Protestants in this study overwhelmingly *supported* scientific research that led to improvements in patients' physical conditions and fertility. In fact, some respondents initially described static boundaries between science and religion, then later in the same interviews began to imply that the perceived boundaries might be more permeable when it came to scientific interventions that can improve human well-being. These findings raise questions about the implicit assumption that mistrust of certain authorities (e.g., doctors) may alienate groups from or influence negative perceptions of science (Gauchat 2011), and they point to the need for further research on how marginalized populations adjudicate between potential religious and scientific conflicts in light of racial and economic disparities. Altogether, our results yield new insights into Black Protestant perceptions of tension and compatibility between science and religion and suggest new areas for further research.

## **BLACK PROTESTANTS AND THEIR PERCEPTIONS OF SCIENCE**

From existing research, we know that African American Christians largely advocate for and share certain core evangelical beliefs with groups identified as “conservative” and “Evangelical” (Emerson and Smith, 2000; Hackett and Lindsay, 2008). And with 74% of African Americans affiliated with conservative protestant traditions (Pew 2009), they are overrepresented in the very Christian traditions that researchers find to be most in tension with certain forms of science (Granger and Price, 2007; Sherkat 2011). The ways race may (or may not) interact with religiously-guided views on science is unclear, however.

Studies find that frequent church attendance may be correlated with more negative attitudes toward science (Evans 2013; Gauchat 2012), and Black Protestants report some of the highest participation rates in worship services (Pew Forum 2009; Shelton and Emerson, 2012). The majority of church-going Black Protestants attend Black churches that, while sharing similar conservative elements of other Protestant groups, have historically been organized in very race-specific ways. These churches are crucial sites for racial identity construction, leadership development (Paris 1985), and the cultivation of ethical visions for more robust and meaningful lives for African Americans (Glaude 2000; Johnson 2004). Furthermore, as many have shown, Black Protestant churches have been important bases for political mobilization and social movements (Pattillo-McCoy 1998; Shelton and Emerson, 2012). For these reasons, Black Protestant churches remain vital institutions for the spiritual and social well-being of African American communities (Taylor et al., 2004), especially in impoverished urban and rural communities (Billingsley 1999; Caldwell et al., 1995; Thomas et al., 1994).

As a result of the unique characteristics of Black Protestant churches, researchers have started to see Black American Evangelicals as distinct from White Evangelicals, using the label “Black Protestants” to differentiate the Black religious experience (Steensland et al., 2000; Woodberry et al., 2012).<sup>2</sup> From this literature, it seems reasonable to explore whether Black Protestants may have distinctively different—and perhaps even more mistrusting—views of science, especially congregants with lower levels of educational attainment and therefore less exposure to science and scientists. Although there is not a wealth of explicit attention given to Black Protestant attitudes toward science (Evans 2011; Gauchat 2012; Granger and Price, 2007; Shelton and Emerson, 2012; Sherkat 2011), there are indications within some literatures suggesting that lower educational levels among certain Black Protestants—which often correlate with literalist interpretations of the Bible—might influence expressions of tension with certain scientific explanations and understandings (Evans 2011; Shelton and Emerson, 2012). Specifically, James Shelton and Michael Emerson (2012) interviewed a range of Black Protestants and found that their commitment to strict interpretations of the Bible linked with “longstanding tensions between education and religiosity,” and that less educated members of Black Protestant churches think “too much education or training can lead to overintellectualizing” (p. 93). They further found that Black Protestants grounded their concern about critical interpretations of the Bible in beliefs about how such “reflective views” are really signs that point to “a lack of faith” (p. 96). According to Shelton and Emerson, Black Protestants believe that the Bible is the most important source of knowledge that one should use in order to organize one’s perception of the social world. Recognizing this body of work, we sought participants from both higher and lower socioeconomic churches in order to uncover how class may influence Black Protestant views in this study.

Education is an especially important component in the SES-religion connection. There is evidence that African American college students self-select out of professions that require advanced training, such as science, because of a lack of confidence (Witherspoon and Speight, 2009). This work, however, does not consider the role of religion in processes of meaning- and decision-making around science. Given the important role Black churches play in African American communities, they are obvious sites for investigating the layers of meaning congregants may make around science. We need clearer accounts of the theological or social convictions that shape tensions toward science within Black Protestant communities in order to understand whether churchgoers perceive all science as potentially conflicting, or just specific domains of science.

The relationship between religion and healthcare within the Black experience is of particular importance. Religious and theological discourses historically served—and

arguably still do serve—to signal Black bodies as inferior. These discourses are undergirded by the legacy of harmful experiments on Black Americans, such as the American eugenics movement and the clinical trials of Tuskegee (Corbie-Smith 1999; Gamble 1999; Morning 2011; Paul 1998). Historians have argued there is a latent type of mistrust of health authorities that circulates within the shared cultural memory of Black America (Reverby 2001). Even if such fraught social history involving medical experiments is just a “fragile” cultural memory among Blacks, one might expect Black Americans to express tension with some forms of scientific research, especially forms of research that rely on human trials.<sup>3</sup> In one well-cited study, Black respondents were less likely than Whites to trust physicians and significantly more concerned than Whites about the potential for harmful experimentation in hospitals (Boulware et al., 2003).<sup>4</sup> Popular books like *The Immortal Life of Henrietta Lacks*—which became a movie starring Oprah Winfrey—may also reinforce cultural expectations of the exploitation of Black bodies by scientists. This history and the continued significance of religion within the African American community at large makes it all the more surprising that we know so little about Black Protestant attitudes toward science and scientists.

## DATA AND METHODS

To analyze how Black Protestants narrate the relationship between religion and science, we utilize a subset of data collected as part of a national study on the science-faith interface among congregants in various religious traditions. We draw on data collected from three Black Protestant congregations, including two in Houston, Texas and one in Chicago, Illinois. These cities and the congregations selected for case study within them offered a diversity of characteristics theorized to affect the religion and science interface, including: theological stance, tradition identification, congregation size and location, and congregational demographics. The research team was based in Texas, with extensive local contacts, and the same team oversaw data collection in Illinois. Consistent with nearly two-thirds (64%) of historically Black churches (Pew Survey 2009), all three congregations were Baptist. Furthermore, all three churches fit the doctrinal model of Black Protestant beliefs, albeit with important differences that we now discuss.

The first church is a large congregation in Houston, TX that boasts a membership of 10,000 and averages between 4,000–5,000 in weekly attendance. The majority of this church’s membership is middle or upper class, and the average age of congregants is 35.<sup>5</sup> Mega-churches—those with weekly attendance over 2,000—tend to cluster in the Bible belt (Thumma 2001). In Texas alone, there are 206 mega-churches whose average attendance ranges from 1,800 to 43,500 (Thumma 2001). Forty-eight percent of mega-churches have core evangelical beliefs, and approximately one-tenth of these congregations are predominantly Black. We conducted 15 interviews at this site.

The other congregation in Texas has approximately 250 people in weekly attendance, in line with the 100–500 averaged in most Black churches (Lincoln and Mamiya, 1990).<sup>6</sup> Congregants at this church are older (average age of approximately 55), and tend to be of lower socioeconomic status and with less education (e.g., only 50% of our interview respondents at this church had earned a bachelor’s degree or higher). In response to members’ needs, and characteristic of Black Protestant churches in impoverished areas in general, the church provides a large number of social services and community programs, such as food and clothing distribution, financial services, and low-income housing (Billingsley 1999; Caldwell et al., 1995; Lincoln and Mamiya, 1990; Thomas et al., 1994). We conducted 20 interviews at this site.

The third church in our study is an African American Baptist congregation in Illinois. This Midwest congregation mirrors the second congregation in age and income levels. For instance, the average age of this congregation is 54, and only 47% of our sample held a bachelor's degree or higher. It differed primarily in size, with a membership of 1,200 and a weekly attendance of approximately 800.<sup>7</sup> We conducted 15 interviews at this final site, for a total 50 interviews across the three congregations.

Together the three congregations allowed access to a diverse sample of individuals. We were able to look how Black Americans with different levels of education and in different occupational positions might frame the relationship between religion and science, which we argue is missing in the current science and religion literature.

After choosing the congregations for our study, we first obtained permission from congregational leaders to study their churches. Then a team of trained researchers, led by two of the paper's authors, conducted several field visits over a period spanning 18 months between May 2011 and December 2013. These observations provided important insight into the theological and social orientations of the respective congregations, enabled researchers to gain access to congregational life, and made it possible for us to connect with potential respondents. Soon after each observation, our team of researchers wrote detailed reports that focused around the science-related content they observed. These observation notes provided important contextual content that aided analysis of respondents' attitudes toward science, raising areas for inquiry in interview sessions.

We used snowball sampling to gather respondents for the interview component of the study. We were sure to choose different snowball chains, including church leaders as well as church members themselves, to maximize variation. We utilized two interview guides for this study: one for congregation leaders and another for congregation members. The guides were semi-structured in order to allow a focused exploration of themes of particular interest to the broader study (including perceptions of science and scientists), while simultaneously allowing us to structure the interview around each respondent's unique answers and insights. Most interviews were carried out in-person, with a few conducted via phone. Interviews ranged from 40 minutes to 90 minutes and were recorded with informed consent from interviewees.

All interviews were transcribed; researchers then analyzed interview transcripts for data germane to understanding how Black Protestants frame the connection between religion and science. We employed a modified inductive process (Strauss and Corbin, 1998), meaning that—for this unstudied area of research—we had only basic coding categories available. We developed from our respondent narratives a more refined set of codes that we then systematically applied to the transcribed interviews. We paid particular attention to how respondents narrated science in relation to their (or someone else's) identity as a Christian. We also considered how their identity as Christians affected their experiences and trust of science.

## EXPANDING BLACK PROTESTANT VIEWS

### Low SES Framings of Science: Independence (or Separation)

One significant framing of science-religion compatibility among our low SES respondents is what we call "independence" or separation narratives. In these framings, respondents, whether citing conflict or collaboration between the two spheres, sought to distinguish or legitimate the boundaries by which the two domains operate. We saw in these views clear contrasts between the two domains: "Science is based on human observation and reason, while theology (or religious belief) is based on divine

revelation,” as one 51-year-old music minister from our low SES Houston congregation put it. He went further to exemplify this type of separation work in his responses when he referred to belief in God: “I mean, that’s not a scientific issue...I don’t want to say that it’s kind of, like, anti-science, but it’s not something that could be proved in a test tube.” This respondent not only separated the two domains but also took the distinction further by esteeming Biblical or divine revelation over scientific discovery. As we will show, we also found this type of independence/separation view in our high SES sample, although the nature of the distinction varied.

### Low SES Framings of Science: Conflict

Again, most of the respondents in our lower SES churches characterized science and religion divides more negatively. In fact, these respondents thought of *scientists* even more pejoratively and typically in two ways: scientists were either atheists or people who represent definite biases against religion. Following Ian Barbour (1990), we characterized conflict views among this group as either *religious existentialist* or *biblical literalist*. In explaining the former, Barbour (1990) notes that the existentialist—whether atheist or theistic—would argue that the “meaning of life is found in commitment and action, never in the spectatorial, rationalistic attitude of the scientist searching for abstract general concepts and universal laws” (p. 12). Thus, the religious existentialist experiences conflict because God can only be found “in the immediate and personal participation of an ‘I-Thou’ relationship, not in the detached analysis and manipulative control characterizing the ‘I-It’ relationship of science.” One lower SES church member, a 42-year-old female secretary/church administrator from Texas, captures this well when she said:

Most of the time, in my opinion, the conflict comes [because]—it’s a believer/unbeliever conflict to me. Like they [scientists] never experienced what I’ve experienced, to me. And that’s where the unbelief comes in...So most of the time it’s the unbelief that’s challenging what we believe. Or a lack of experiencing the relationship in what we believe in. So, and that’s the way I look at it ... if it’s in the news or in the media, it’s normally the person that’s challenging it is a non-believer. And haven’t come to know God in the way that we know God, and their faith is not- they don’t have the faith that we have. So that’s the way I look at it.

Notice how, in spite of abundant research that shows most scientists do not identify as atheist (Ecklund 2010), this respondent assumes that all scientists are “non-believers.” She further suggests that because scientists do not have personal “experiences” with God there will naturally be a divide. It’s worth noting too that the respondent seems to have a conflict with scientists or people who are committed to science rather than science as an abstract concept.

A similar science and religion tension narration arises from our sample in Illinois, also comprised of congregants with lower socioeconomic status. One 51-year-old woman from the Chicago low SES congregation who worked in customer service explains, “they [scientists] would be more inclined to believe that there was no [God]—everything has some kind of explanation other than an extraordinary explanation—that they [scientists] were biased toward that, that they felt that there was no higher power involved in anything.” Likewise, the 55-year-old male pastor from this congregation also stated that scientists are biased. He affirms a belief among most laity we interviewed: as a group, scientists just do not have much respect for religious people.

A 49-year-old female police clerk from the low SES Illinois congregation also saw a conflict, but offered a different explanation. In her sense of things, the skepticism of the scientist puts the scientist at odds with religious belief. “Yeah...the nonbeliever is not going to believe everything,” our respondent quipped, and “that’s where the conflict will come in, because nonbeliever scientists wouldn’t believe everything in the Bible, front to back. They just wouldn’t. And then if you read the Bible, some people take things out of context. That’s why you have to study [the Bible]!”

Congregants in the two lower SES churches generally saw scientists as promoting a biased agenda. Scientists are those, for example, whose vocation necessarily means that theological claims are implausible. One of our older 79-year-old female respondents from the low SES Chicago congregation, a former university librarian, captures this theme most vividly when tying this understanding of bias to views of evolution. She says, “the scientist that believes...in evolution, that we came from the apes, he must be biased.” Building upon this, she explained that the scientists have biases because “he [a scientist] doesn’t realize the power of God. He doesn’t believe because he’s a scientist... [He thinks] that there’s a scientific reason for everything and God is just not part of his belief.”

These framings reveal a clear sense of divide between religion and *scientists*, not necessarily science as a whole. It also is striking that this is a religious divide, not a racial-religious divide. In other words, respondents from our low SES sample did not specifically indicate the lack of Black scientists as problematic so much as the perceived lack of belief thought to characterize scientists in general. Furthermore, these respondents indicated a divide between scientists as people and religion as something you either have or not. In these cases, one notices other important trends as well. In the two churches in low SES neighborhoods, respondents were also older. This group had little familiarity with the possibility that science and religion could be compatible and—because other concerns are more pressing, as the pastor of these congregations highlighted—they do not readily make connections about the science and faith interface. The 60-year-old male pastor from our Texas low SES congregation explained it this way: “Issues such as social dysfunctional-ism, criminal behavior...seniors dealing with the routine of daily living and struggles to gain employment” are matters that congregation members care more deeply about than science.

Both pastors of the lower SES congregations reported having more education than the majority of their members, and their answers to interview questions reflected this privilege by offering more nuanced explanations of science-religion conflict. The 55-year-old Illinois pastor with a BA and two advanced theological degrees, identified tension in only two areas. One area is what he refers to as “genetic sequence and coding,” when scientific authority seeks to influence or “determine whether or not a child should be aborted based on an analysis of how healthy they’re going to be.” To him, this crosses a moral boundary, and he thinks physicians who depend upon these types of scientific interventions and influence parents based on them do so on precarious moral grounds. Second, this pastor thinks science and religion are in conflict when accounting for origins of humanity, especially in instances where scientists eliminate the role of God as creator and giver of life. Yet he was quick to conclude that, outside of these two particular areas, he is positive about science. He explained:

I’m from an era where science was a very awakening thing for us in school; it was very exciting and very interesting and always has been to me. But having said that because there are some things that I do not agree with does not mean that I believe or that I would teach that all science is not any good or that *all* science is directly in contradiction to all religion.

Similarly, the 60-year-old pastor of the lower SES Black Protestant congregation in Houston was reluctant to denigrate science as a whole. Rather, he sought to isolate conflict between the domains, providing an alternative perspective by which to explain *why* conflict arises for his parishioners when reflecting on scientific authority. As he sees it, even though his congregants might not be conversant with scientific issues, they perceive conflict, and “rightfully so,” in his opinion, based on how most public discourse about creationism and science seems rife with tension. As he explained, most of his members read the Bible literally and thus tend to be creationists. Thus, “if you’re a creationist, and opposed to evolution,” he asserts, “then scientists [represent those who] start trying to back up evolution, and then the faith community will say, ‘Well, I don’t know how, all I know is God made the world.’” Here we see in both pastoral responses a clear attempt to establish where the boundaries of faith and science seem obvious to persons of faith. Moreover, they both suggested that their congregants perceive limits to scientific knowledge and view God as the final arbiter when it comes to important moral decisions.

We highlight these two pastoral responses about the perception of science because they represent the only views among the low SES Black Protestant churches in our sample that offer some *explanatory* framing about congregant views, citing the sources of tension with science without going further to reflect any negative attitudes toward scientists per se.

### High SES Framings of Science: Independence (Separation)

Views of separation among high SES respondents did not necessarily equate conflict with authority. Rather, there were more technical, jurisdictional reasons for why science and religion might arrive at different conclusions. In our high SES Houston sample, a 48-year-old male cardiologist and author emphatically claims, “There’s *no* conflict.” Defending his assertion, he goes on to establish religion-science boundaries by defining how the two domains differ. In his words, “If you look at religion, religion is the study of the creator. It’s man’s attempt to better understand the creator. Science is man’s attempt to understand the creation. And so, they’re not conflicting at all!” He then distinguishes the methods of science and the methods of faith when thinking about perceptions of conflict. He highlights how science for him is about “mechanisms.” A lengthier excerpt from our interview with him illuminates this:

...I mean it’s quite clear to me, when you try to understand, just like the analogy of the rainbow. Why is the rainbow there? Well the religious person is going to understand it from a standpoint of God’s covenant with man. And the scientist says, ‘Well, what’s the mechanism?’ And there’s no conflict. I mean, yeah God put the rainbow there. Why? Because he made a covenant with Noah. Well what’s the mechanism by which he put it there? Well you create the refractory properties of raindrops and the prism and that’s how it got there [says the scientist]. But it’s still God’s creation!

Here one observes what Barbour calls a more “effective way” of separating science and religion; this respondent essentially shows how science and religion employ differing languages (p. 13). Science and religion perform different functions for this respondent, and thus he feels one should hold them to different standards of judgment. This respondent discerns the differences between science and religion linguistically. As Barbour attests, science (or scientific language) is good for developing theory as a tool for “summarizing data, correlating regularities in observable phenomena,



and producing technological applications,” while religion (or religious language) is better for recommending “ways of life” and for binding “individuals in communities of shared memories, assumptions, and strategies for living” (pp. 13-15). We often found this type of “separation work” happening in Black Protestant framings. In fact, a 26-year-old male, one of the religious leaders (Minister of Christian education) of our high SES church, says, “You see, there is not a conflict between science and faith because they are very different.” Yet, he adds, they both have “subjective elements to them.”

### High SES Black Protestant Framings of Science: Conflict

Although more pronounced in our two lower SES congregations, there were a few individuals who framed science-religion as being in conflict in our high SES congregation. But what becomes prominent when comparing conflict framings between the groups is that education appears to be a significant factor when examining the strength and the weakness of the perceived conflict. In other words, respondents who had higher education levels expressed conflict by questioning or contesting certain scientific *conclusions* rather than scientific methods. They suggested that conflict has more to do with the limits of each domain rather than any particular scientific or moral agenda. For instance, a 61-year-old licensed nurse and minister from our high-SES Houston congregation, when pushed further about areas of perceived conflict, says, “Just evolution. I see it [i.e., evolutionary theories] as very destructive sometimes ... because you [scientists] are still trying to make God... trying to make evolution say ‘This is the way how man was developed.’ Yet I believe even before there was a cell there was God. If there is a cell it’s because God gave it.”

Again, in the above narratives, higher educated respondents and those with higher occupational statuses give measured accounts of conflict between religion and science. Unlike our respondents from lower socioeconomic backgrounds, they point to how science might conflict with certain essential areas of Christian teaching, and one sees that this science-religion tension is a consequence of the different ways the two spheres rationalize reality and how both then vie for moral/cultural authority.

Such findings support the notion that higher education among Black Protestants, in particular, may increase the range of possibilities for science and faith collaboration (Evans 2011; Gauchat 2012). In accord with this, we found more nuanced characterizations among Black Protestants from higher SES backgrounds when citing cases where there may be tension between science and religion. Where respondents do allude to conflict, they do so within larger explanations of why others might perceive there to be conflict.

### Medicine: Area of Overlap

Although views about science-religion tensions among Black Protestants of higher socioeconomic backgrounds sometimes starkly contrasted with those of lower socioeconomic backgrounds, there was convergence between the groups in understandings of the conditions under which science and religion collaborate well. Both groups clearly seek to negotiate the perceived boundaries of science and religion in practical matters, like medical interventions, where boundaries appear porous and not easily delimited. Here we deviate slightly from Barbour’s (1990) designations, for though our respondents suggest that there should be *dialogue* between the two, we had specific examples of how science and religion *collaborate* in medical practices. For example, a 29-year-old female health care industry manager from our high SES Houston

congregation asserts that those who see conflict between religion and science must “think that God is so small that God did *not* make the science happen or give the people who think [scientifically], that sort of knowledge.” She also thinks that all opinions that people might have result from “what they have been exposed to.” Thus, based on her experience in the health care industry and how spirituality and faith merge, she says it is “silly to think that the two really conflict, when it is probably just a matter of misunderstanding.” Another religious leader in the congregation, a woman in her thirties who serves as minister to the young adult population, states:

I understand the reason for saying it [*that there's conflict between religion and science*]; I don't personally believe that there is... I believe that the laws of nature actually give us insight and light to who God is because I believe he established them so there's no conflict for me there. Now there are things we can't explain but so much of life is a mystery that's not a problem for me. To say I don't know what we don't know is okay because we don't, that's part of life, the journey is exploring it.

These “collaboration” narratives are particularly noticeable in areas of medical practices. For instance, respondents of both socioeconomic backgrounds suggest that cases where science can assist in preventing or detecting potential birth defects make the science-religion divide more attenuated. While acknowledging that there can be and is some conflict between science and religion, medical advances seem to weaken claims of conflict for our respondents. A 61-year-old woman from our high SES Black Protestant church sample, a retired banker who worked in the banking industry over thirty years, models this type of collaboration framing. Talking specifically about in vitro fertilization and stem cell research, she says she does not have a “religious problem” with them at all and argues that it is God's desire for humans to have a “bountiful life” and “if it [in vitro or stem cell technology] helps me, I want it... I don't believe that there is anything anti-Christ or anti-whatever, anti-religious about that.” Similarly, another respondent from the same church, this time an older, retired 77-year-old engineer, carefully framed how scientific advances could be healthy for medical practices; yet he acknowledges these advances are problematic for him when they depend upon morally questionable practices. As he puts it:

Stem cell research. Uh, I think it's absolutely great. A lot of things can be learned on how to control cancer and diabetes and all that sort of stuff with stem-cell research, which is just amazing to me. I think it should be encouraged, I think they should do more. Now, I know that the way they started stem-cell research was babies, aborted and all that sort of stuff. But there are different ways that things can be, the same thing can be done without going through that.

Although this respondent indicates an understanding of embryonic research that is factually inaccurate—and on this subject, researchers have shown such a misunderstanding is not uncommon (Ecklund and Scheitle, 2017)—we again find a theme of compatibility. Though conflict rhetoric is stronger among our low SES sample, when discussing how medical advancements may improve human diagnoses or patient well-being, the divide between science and religion becomes much weaker. In such instances, even our lower SES respondents demonstrate the accommodation framing for science-religion tension. Here, we will cite one glaring example of this, as expressed by one of our respondents in Chicago, a 39-year-old woman who works as a financial assistant. When asked about technologies and scientific advances that allow parents to diagnose birth defects in embryos, she mitigated her earlier conflict stance,

saying “...if it’s really something that can be—[if] you have a test and it says well your child could have sickle cell or cerebral palsy, and we can stop it by you taking this vitamin or that, I agree with that part of it.”

Like our other examples in this section, this last one shows how the science-religion conflict perception becomes porous and even transforms into views of collaboration. What respondents approve of about science is that it provides humans with more knowledge about the world and about how human bodies work. The 26-year-old religious leader from our high SES church takes it further, and says that he wishes religious organizations would be more purposeful and thoughtful about relating the two realms. Situating science education within the church’s larger mission of “building whole persons,” he feels that science and its relation to religious faith is an important element in his church’s mission of empowering members in their pursuit of God. Nonetheless, our low SES respondents are careful to hold their religion in higher esteem than science when it comes to providing an authoritative framework through which to make “big” decisions on matters that may have significant moral implications.

The common thread in these framings, and what we find most intriguing, is how respondents sought to negotiate the boundaries of science and religious belief in areas where they saw practical convergence of the two domains, namely in issues of contribution to medical care as well as ethics surrounding medicine. Where initially some respondents described static boundaries between science and religion earlier in our interviews with them, these same respondents began to imply that the perceived boundaries might be more permeable when it came to scientific interventions that improved human well-being. Such specific understandings of the relevance of the science and religion debate to specific scientific technologies may differ between Black and White Christians (Ecklund and Scheitle, 2017).

## SUMMARY AND DISCUSSION

Overall, we find that the perceptions of science-religion compatibility found in this sample fit generally in the categories of conflict, independence, and collaboration (Barbour 1990), although we problematize these categories in two key ways. The first way addresses issues of class and specifically education. Our low SES congregants framed religion and science as at odds, or in conflict. For them, tensions with science extended to scientists themselves and particularly how much trust they place in scientists as people. Also, we showed how laity in these low SES churches characterized scientists as atheists or those with definite biases (biases that are sometimes scientific and sometimes biases against people of faith). For them, there were clear boundaries relating to what science and, in particular, *the scientist* represented. Accounting for this, we highlighted most of their negative perceptions of science and scientists under *conflict* views. In contrast, however, our high SES respondents viewed the science-religion interface—and even scientists themselves more positively—and saw no conflict between the spheres; where there is perceived conflict, according to this group, it need not be. Most of their responses fall under framings of *collaboration*, and we show how these high-SES Black Protestants tended to understand scientists with more nuance, appreciating the scientific method, unsurprisingly, in more sophisticated ways than our low SES sample.

The second way addresses areas in which science and religion may collaborate to improve human well-being. Remarkably, we did *not* find Black Protestants of either socioeconomic status expressing distrust of medical science, as the literature on African

American medical history would suggest and where we thought Gordon Gauchat's (2011) framework on alienation could become relevant. As we pointed out, the tension between science and religion became much weaker in areas where science contributed to health and human well-being. This was especially true when respondents discussed their opinions towards science contributing to new technologies that can detect the potential for birth defects or improve fertility options. That our respondents of both class positions shared positive attitudes towards stem cell research and human reproductive technologies appears to be different from White conservative Protestant groups (Evans 2002). This raises new questions about whether the persistent racial health disparities present in African American communities has potentially altered the perceptions that believers have of medical interventions. We are unable from our data to determine whether this is primarily a matter of race, but we are optimistic about the potential for further research in this area.

Another area of similarity was how both high and low SES Black Protestants established boundaries between science and religion, and we highlighted typical ways of framing this occurrence under our section on independence/separation. Those we interviewed limited scientific authority to the empirical realm, to the collection of facts about the universe through experiments and observations, and to the development of theories that explain why the universe works in the way that it does. Religious authority for these respondents, on the other hand, addresses larger questions of ultimate meaning and morality.

There are a number of ways in which this research could be extended. First it would be prudent to conduct research on other denominations and faith traditions within African American communities. Given the dearth of research, we designed our study to start with the most common denomination, Baptist. We could expect to see a different orientation towards conflicts between science and religion in less literalist congregations. The growth of Islam among American Blacks also suggests a need for more investigation of how issues of scientific advancement matter beyond Christianity. In particular, we might expect different understandings of the science and faith interface from a group that is—in the case of Black Muslims—*both* religiously and racially marginalized in American society.

Our study also raises questions about the role of religion in the underrepresentation of African Americans in science. While not a direct area of inquiry in this study, the fact that our respondents consistently gave answers to questions about science and scientists in ways that distanced themselves from the field suggests we need to better explore the religion, science, and race interface. To understand this, we need social-psychological studies that can better explicate how respondents form their ideas about what a scientist believes (and thus whether they can imagine themselves as scientists). The fact that one of our respondents said that human embryonic stem cell research started by using aborted babies, which is factually inaccurate, points to a need for better understanding of where people get their information about science and thus begin to form perspectives. Also, outside the scope of our research design for this study, but an area that may prove fruitful for others, is to investigate how Black Protestants encounter science in daily life. We hope that by giving greater attention to issues that intersect race, religion, and science, our work propels others to think more critically about why science matters in the lives of racially marginalized populations.

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## NOTES

1. Data collection for this paper was funded by the John Templeton Foundation, Religious Understandings of Science Study (Grant JTF #38817), Elaine Howard Ecklund, PI.
2. Some scholars have critiqued the definition of ‘Black Protestant’ put forth by Steensland and colleagues (2000), arguing there is more diversity within the denomination than implied (e.g., Taylor and Merino, 2011). Still, the use of the term helps to capture important structural distinctions between Black and White religious congregants.
3. We use fragile here in reference to Reverby’s (2001) idea that narratives and even fictions of what happened carry important historical meanings even when people do not know about the specific facts surrounding the event. Particularly, within African American communities, such narratives alter perceptions about the use of Black bodies by public health authorities.
4. In the Boulware and colleagues’ study, more than two times as many Blacks agreed with the statement, “Hospitals have sometimes done harmful experiments on patients without their knowledge” (2003, p. 363).
5. We obtained congregational class composition from interviews with religious leaders (High SES BP\_South Congregation, Minister of Christian Education and Discipleship, High SES BP\_South Congregation, Associate Minister) and participant observations.
6. We approximated congregational attendance from an interview with the pastor of this congregation (Low SES BP\_South Congregation, African American, M, 60) and participant observations.
7. We approximated congregational attendance from an interview with the pastor of this congregation (Low SES BP\_Midwest Congregation, African American, M, 55) and participant observations.

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