

SOME WAYS EMERGING ADULTS ARE SHAPING THE FUTURE OF RELIGION AND SCIENCE

by Greg Cootsona

Abstract. This article addresses how the field of religion and science will change in the coming decades by analyzing the attitudes of emerging adults (ages 18–30). I first present an overview of emerging adulthood to set the context for my analysis, especially highlighting the way in which emerging adults find themselves “in between” and in an “age of possibilities,” free to explore a variety of options and thus often become “spiritual bricoleurs.” Next, I expand on how a broadening pluralism in emerging adult culture changes both the conversation of “religion and science,” on one hand, and the locus for their interaction on the other. In the third section, I address the question of whether there exists a consensus view of how to relate religion and science. Paradoxically, though 18–30-year-olds perceive that there is conflict between science and religion, they personally endorse collaboration or independence. Finally, I draw conclusions for practitioners and theorists.

Keywords: Ian Barbour; philosophy of science; religion; science; theology and science

As Alfred North Whitehead wrote almost ninety years ago, “When we consider what religion is for mankind and what science is, it is no exaggeration to say that the future course of history depends upon the decision of this generation as to the relations between them” (Whitehead [1926] 1967, 181). We are certainly not Whitehead’s “generation,” but what if this exhortation is recast for today? Instead, what if we look at the generation of today’s emerging adults (age 18–30)? How will the attitudes of emerging adults shape the present and future interactions of religion and science?

Emerging adults’ views and the influence of these views are transforming the way our culture talks and writes about science and religion, and this article will outline key aspects of these changes. It will be divided into four sections. First of all, I present an overview of emerging adulthood to set the context for my analysis, especially highlighting the way in which emerging

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adults find themselves “in between” and in an “age of possibilities” (Arnett 2000, 479). They are free to explore a variety of options, including religious ones, and thus often become “spiritual bricoleurs” (Wuthnow 2007, 135). Next, I will expand on the ways that a broadening pluralism in emerging adult culture and consciousness changes both the conversation of “religion and science,” on the one hand, and the locus for their interaction (not simply in churches or academic institutions) on the other. In a minor way, I also offer a critique of Ian Barbour’s classic four-part typology. In the third section, I will address the question of whether there exists a consensus view of how to relate religion and science. In a paradoxical way, it appears that 18–30-year-olds *both* perceive there is conflict between science and religion *and* personally endorse collaboration or independence. Finally, I draw a few conclusions for practitioners and theorists and note directions for future research.

My overall goal in this article is to note some contours of this transformation, not to offer a systematic resolution to new problems. Indeed, for the theoretician analyzing the relationship of science and religion, for those like me who advocate an integration, and for the practitioners in either of these fields, emerging adults are adding some new elements to the conversation, which we need to comprehend in order to do our work effectively.

Before proceeding further, two definitions are in order. What do I mean by “science” and “religion”? As working definitions—or perhaps as heuristics—I offer the following for my two key terms. *Science* is “knowledge about, or study of, the natural world, framed in theories based on observation, which are tested through experimentation.” *Religion* is a notoriously difficult term to define, a fact which provoked Alister McGrath in his introduction to religion and science to concede, “there is no generally accepted definition of religion” (McGrath 2010, 5). This approach has the virtue of intellectual humility, but is ultimately inadequate because I am comparing two fields and it is essential to let the reader know what I mean by them. I will lean toward a definition that includes cognitive content in order to compare it with science. Therefore, I offer this definition, not with a hope that it is unassailable, but that it is adequate: “religion is the belief in God, many gods, or Ultimate Reality, as well as an associated, organized system of teachings, leadership, and ceremonies with rules used to relate to God, a plurality of gods, or Ultimate Reality.” These are the definitions I have adapted from various dictionaries and standard texts in the field (e.g., Geertz 1973, 87–125; Smith and Green 1995, 893–94; Smith 1991), which I then reworked and finally tested through teaching classes on religion and science with undergraduates (i.e., 18–23-year-old emerging adults). Given these definitions, and for the purposes of this article, science can interact with religion on the level of worldviews.

A SKETCH OF EMERGING ADULTHOOD

In this article, I am seeking to discern the shape of the future interaction of science and religion by analyzing the views of emerging adults (age 18–30) and what they have led me to conclude.

Why do I focus on emerging adults? Identifying key ideas of the demographic that will increasingly lead the dialogue is a simple and effective method to forecast the future. In a fairly straightforward way (as suggested by my title), I am following the lead of Robert Wuthnow's study of this demographic, which he subtitled, "How Twenty- and Thirty-Somethings Are Shaping American Religion" (Wuthnow 2007).

Therefore, I will synthesize insights from key demographic research (e.g., Hill 2014, 2015; Smith and Snell 2009; Smith, Christoffersen, and Davidson 2011; Wuthnow 2007), which will provide the backbone of my analysis. Nonetheless, I will also enhance it with interviews and surveys of emerging adults conducted through an 18-month research grant project for which I served as principal investigator, Science for Students and Emerging Young Adults (SEYA). This project analyzed the attitudes of 18–30-year-olds in faith and science, particularly the way they are formed and the way they change.¹ A brief word about this study: I convened a group of twelve thought leaders in emerging adulthood, which I will describe below. A SEYA team taught on the integration of science and religion with 638 emerging adult participants and had informal discussions about relating science and religion. We presented target groups in Northern California and in New York City with a questionnaire, based on surveys from *Souls in Transition* (Smith and Snell 2009) and *You Lost Me* (Kinnaman and Hawkins 2011). We asked these groups to study and to discuss resources such as *Test of Faith*² (developed by the Faraday Institute at Cambridge University) or Alister McGrath's *Science and Religion: A New Introduction* (2010), usually during a four to six week period, and surveyed them before and after to discern whether experiencing this religion and science curriculum made a difference in their attitudes about the possibility of integrating the two. Some of that research will appear in the third section below. Finally, I conducted in-depth qualitative interviews with 28 college students and post-college emerging adults between September 2014 and October 2015 as a component of SEYA. The analysis from the project effectively mirrored the conclusions of larger studies mentioned above. Accordingly, I will use quotes from these interviews not as primary data, but to exemplify what this research on emerging adults has demonstrated.

In this article, I am employing Jeffrey Arnett's category of "emerging adulthood" (Arnett 2000, 469–80) as a stage of life that is no longer adolescence, but neither is it fully adulthood. I admit that there are certainly some critical questions worth pursuing (see Arnett et al. 2011), and I am not committing to all its implications. Nonetheless, I find this to be a

highly usable paradigm because it recognizes the shift that our culture is undergoing in which emerging adults are reaching, later than in the past, five key milestones of adulthood: “leaving home, finishing school, becoming financially independent, getting married, and having children” (Setran and Kiesling 2013, 2). For example, according to the Research Network on Transitions to Adulthood and Public Policy, which completed its work in 2009 having analyzed forty years of demographic data, in 1960 two-thirds had achieved all five of these markers by age 30, but by 2000 less than 50% of females and one-third of males had done so (Setran and Kiesling 2013, 2). Wuthnow arrives at a similar conclusion on the delay of fully entering adulthood by focus on two markers: marrying and having children later (Wuthnow 2007, 11).

Arnett portrays emerging adulthood with five interrelated characteristics: (1) emerging adults are actively looking for personal meaning and identity; (2) their lives are marked by instability (as I will note again below) through regular relocations, job changes, and revision of life plans; (3) they tend to be self-focused, liberated from parental oversight and significant responsibility for others; (4) they feel “in between”—beyond adolescent life but not yet at full adult status; and (5) finally, they live in an “age of possibilities,” optimistic about the future and keeping their options open (Arnett 2000; summarized by Setran and Kiesling 2013, 3–4). Naturally, this is the description of a generalized type, since those of lower socioeconomic status often need to move quickly to develop job skills and move more directly out of adolescence and into adult responsibilities (Setran and Kiesling 2013, 242, n. 12). With that caveat in mind, Arnett’s conclusion still possesses merit: “Having left the dependency of childhood and adolescence, and having not yet entered the enduring responsibilities that are normative to adulthood, emerging adults often explore a variety of possible life directions in love, work, and worldviews” (Arnett 2000, 469). As a group, 18–30-year-olds are liberated in seeking out their convictions about religious life, their relationship with faith not yet being defined by being “in a family” or “with a family.”

The reality of this radical freedom is also often a deep anxiety. “Because many of the stable and scripted road maps of the adult life course have vanished, there is little clear direction on how to proceed through the twenties. In a period of instability, continual change, and new freedom, the weight of personal responsibility can be overwhelming” (Setran and Kiesling 2013, 4). As a result of this instability, some, like Alexandra Robbins and Abby Wilner, even talk of a “quarterlife crisis” (Robbins and Wilner 2001). Christian Smith, in commenting on why he also subscribes to the nomenclature of “emerging adulthood,” summarizes well both the positive and negative sides of this experience. “The features marking this stage are intense identity exploration, instability, a focus on self, feeling in limbo or in transition or in between, and a sense of possibilities,

opportunities, and unparalleled hope” (Smith and Snell 2009, 6). These, of course, are also often accompanied—as we will show—by large doses of transience, confusion, anxiety, self-obsession, melodrama, conflict, disappointment, and sometimes emotional devastation.” Smith’s companion book, which further analyzes the work he directed, highlights the shadow side of emerging adulthood—and the subtitle makes this clear—*Lost in Transition: The Dark Side of Emerging Adulthood* (Smith et al. 2011).

As part of the SEYA project, in April 2015 I invited twelve thought leaders in emerging adult culture—biblical scholars, theologians, and pastors—to discuss their insights. They described this demographic with several words and phrases, which mirror—and to some degree, enhance—what has been mentioned previously about emerging adults. One key phrase, which in many ways summarized the problems for emerging adults, was that their lives are “marked by instability in relationships, purpose, and faith.” Similarly, a lapidary evaluation that resonated strongly with our combined years of pastoral ministry with young adults was the word *anxiety*. Here I am reminded of Setran and Kiesling’s phrase, “While many of these emerging adult changes can be exhilarating, they also tend to produce a great deal of anxiety” (Setran and Kiesling 2013, 4). And this openness and its related anxious stress—set within the “tinkering” with various options as *bricoleurs*—characterize the life of 18–30-year-olds and set the context for their culture. Moreover, these specialists commented that emerging adults—in light of the multiple forms of information they faced—are caught in the “pastiche of postmodernism” and therefore can display “delayed self-awareness” and (captured in a memorable, though somewhat harsh phrase) can be “choice phobic.” This represents the shadow side of possibilities and tolerance, which I mentioned above, as a response to pluralism and to which *Lost in Transition* points. Nonetheless, emerging adults possess prodigious technological savvy and have an ability to take in a wide range of ideas.

With these comments about emerging adulthood in mind, there are some implications. If anything characterizes contemporary emerging adult life, it is pluralism—this generation has been formed in an age of dazzling diversity of all kinds, including worldview, religion, sexual identity, and racial-ethnic concerns. Life is open with greater possibilities than for past generations. Returning to Arnett’s comment about “worldviews”—consistent with my definition of religion—the attendant fact of life for emerging adults is tolerance, which is sometimes dismissed as indolence, but can be better understood as a strategy for negotiating the curious interplay of all these cultural factors. Accordingly, the lifestyle of many 18–30-year-olds is that of *bricoleur*—to use Robert Wuthnow’s phrase (which borrows from Claude Lévi-Strauss)—those who love to “tinker” or assemble of variety of disparate objects to create a composite. “A tinkerer puts together a life from whatever skills, ideas, and resources that are readily at

hand” (Wuthnow 2007, 13). This has significant implications for the religious attitudes of emerging adults, which I will discuss below. (It is worth noting that, since Wuthnow wrote his study in 2007, some of his subjects are now older than thirty, but his research on emerging adults is nonetheless relevant. I am analyzing 18–30-year-olds primarily from the angle of psychological development more than from a particular demographic.)

SPIRITUAL BRICOLEURS: HOW THEY CHANGE THE CONVERSATION AND WHO CURATES IT

A broad and multiform pluralism therefore radically marks this generation, and the implications of this reality head in two directions. First of all, being bricoleurs implies that emerging adults take various aspects of a panoply of religious traditions, thus becoming what Wuthnow calls “spiritual bricoleurs” (Wuthnow 2007, 135). Second, there is a widening of the venues for the dialogue of science and religion. I begin with the first implication.

In discussing the relation between religion and science, it sounds like a conversation about two things. And that fact may deceive us in understanding the attitudes of 18–30-year-olds on the topic. Emerging adults have grown up in an environment saturated with options and possibilities. This experience has been augmented through the explosion of knowledge on the Internet, with the number of websites fast approaching one billion. In some ways, this is essentially the reality of pluralism, and one could argue that this not really a new problem. But that notion strikes me as a bit naïve. Pluralism is not entirely novel, to be sure, but it will certainly continue to increase and widen in its scope. And for the focus of this article—namely, emerging adults—the panoply of options available makes it difficult to decide about science and religion. A recent article by Zainal Abidin Bagir rightly notes that this simple “and” between “science *and* religion” obscures a mass of complications; for one thing, that both are primarily about ideas (Bagir 2015, 405–07, especially 406; cf. Cantor and Kenny 2001, 778). And there are other concerns: Emerging adults are not only facing the situation of *religion* (in the singular) and the way it interacts with science, they are coming to grips with the variety of religions that can be brought to bear on scientific insights—not only the five classic world religions of Hinduism, Judaism, Buddhism, Christianity, and Islam, but also religious traditions with large numbers of adherents such as Sikhism and Wicca, and also indigenous religions as well. Bagir rightly highlights these concerns and concludes, “The intention to expand the discourse by taking into account the pluralistic landscape that we know and experience today requires not simply inviting more participants from different religious traditions but also demands the expansion of the conceptions of ‘science’ and ‘religion’” (Bagir 2015, 216).

Still, I think we need to go further. What would it mean to expand our conception of “religion”? As I have particularly learned in classroom teaching and personal conversation, students often do not feel they know enough to subscribe to any one religious tradition, and therefore they often become what Wuthnow describes as “spiritual bricoleurs,” which

involves piecing together ideas about spirituality from many sources especially conversation with one’s friends. We have seen that spiritual choices are not limited to the kinds of denominational switching that some scholars are content to emphasize. Spiritual tinkering involves a minority of young adults in church shopping and church hopping. It also takes the form of searching for answers to the perennial existential questions in venues that go beyond religious traditions and in expressing spiritual interests through music and art as well as through prayer and devotional reading. (Wuthnow 2007, 135)

As Wuthnow points out, this tinkering is not simply about moving within Protestant denominations or a single religious tradition, it is about decentering one’s sources for religious input. This reality makes it more challenging to see how to relate *religion* and science, since many emerging adults do not subscribe to one religious tradition, but often combine a variety, and thus there is no one religious tradition to bring to science. In addition, as spiritual bricoleurs, most emerging adults will not have one central place for authority and therefore the locus of the interaction of religion and science is expanding. In some ways, this reality overlaps with the concept of “polydoxy” (see Keller and Schneider 2010) in its decentering and individualizing of authority, but it is less focused on Christian discourse than polydoxy. (One notes, for example, that, in her overview of, and reflection on, the concept in the thirteen-page article summarizing it, “Theology’s Multitude: Polydoxy Reviewed and Renewed,” Catherine Keller uses the term “Christian” or “Christianity” forty-one times [Keller 2015].) Tinkering is a way to seek personal expression—conversely, it may also be one strategy for keeping one’s religious tradition. As one student, Taylor, commented, “If someone is Catholic, they may not believe the whole. The way they stay in church is to pick and choose.”

Emerging adults are experimenting with various religious inputs and therefore not subscribing to one single religious tradition. Put a slightly different way, emerging adults find it hard to decide on *one* religion in light of all the possibilities for spirituality, which makes it difficult to know which religion to bring to science. “I can’t commit to any religion until I know more” was a common refrain in my surveys and interviews, which may reflect “choice phobia,” but may also be a statement of supreme humility. And this pluralism is not simply moving beyond religion and Christianity to any number of other religions, whether “world religions” or indigenous ones. It is about dividing religious practice in various slices.

Analogically, this approach to religion is like an iPod or Pandora playlist instead of a vinyl LP: the listener makes the choices from a variety of artists and is not bound by the sequence that the artist herself assembles. In addition, there are those who synthesize belief with materialism, such as the hard-core materialist biochemistry student I interviewed who could not deny that he prayed and the requests seem to be granted. He remains unsure that this is not simply coincidence, and yet continues to pray. The blend of various beliefs—and even unbelief—confuses the theoretician who seeks pure types, but that is the reality of emerging adult culture. Ultimately, the choice may be based on an inherent pragmatism, and not on what is theoretically true. All this makes twenty-first-century pluralism, as practiced by 18–30-year-olds, complicated and dizzying to grasp. We have left the world of two-dimensional “science and religion” to something much more multidimensional for which I frankly have no substitute term.

Therefore, there is a further expanding of those who curate this conversation and thus where it happens. As Wuthnow commented above, spiritual tinkering also decenters the “venues” for religion and for its interaction with science. In the past, it was easy to proceed with the assumption that science and religion is discussed in congregations and in academic institutions such as seminaries, Christian colleges, and sometimes public universities. This is changing.

The key to the alteration of venues is to find how emerging adults come to their conclusions about topics such as religion and science. It is not simply about knowledge, but, as researchers have discovered, but one’s “intuitive cognitions” or “feelings of certainty” that make the decision about acceptance of evolution, for example, and override rational concerns (Ha, Haurly, and Nehm 2011, 95–121). This means, for the 18–30-year-olds who approach this question as Christians, that Hill’s research indicates that a pastor’s voice, because it offers feelings of certainty that are central to defining a social world (and thus of what can be thought or not), is probably more important than the Internet or the college classroom. “For most students, then, it matters little what their professor teaches. . . . What their friends, parents, and pastor thinks is going to be far more important, because their social world is inextricably tied up with these significant others” (Hill 2015, 56).

In contrast, for seekers outside of religious communities, they are often distrustful of the church, synagogue, or mosque as a place to seek out answers about science and religion. Partly, this reflects distrust in institutional religious traditions as repositories for truth seeking. Partly, whether this is accurate or not, imams, pastors, and rabbis are seen as “hired guns” who give answers that always reinforce their respective traditions because they are committed to doing so. In this search for religious answers, one result is that many emerging adults would rather Google than go to a congregation in pursuing answers about science and religion. One of the questions

I posed in the interviews was this: “Where would you go to look for answers about science and religion?” and “the Internet” constituted the most common response. Nevertheless, these emerging adults find faith in the Internet (as it were) because of its putative neutrality, openness, and objectivity. (Worth noting is that, in addition to the Internet, academic voices seem also to possess an air of neutrality for those outside faith communities.) The net result is this: in order to make sense of diversity of options, emerging adults increasingly look to the Internet, which means that the locus of their pluralistic search for relating—and perhaps integrating—science and religion will continue to migrate to a diversity of locations, but especially virtual ones.

TOWARD *BOTH* A CONFLICT AND COLLABORATION MODEL OF RELIGION AND SCIENCE

It is worth making the next observation about emerging adults’ attitudes toward religion and science by first relating it to Ian Barbour’s classic fourfold typology for relating science and religion: conflict, independence, dialogue, and integration (Barbour 2000, 7ff.). In many ways, this typology has set the agenda for the modern study of religion and science and has remarkable staying appeal. For example, Longest and Smith employ Barbour’s categories in their study (2011, 849). Nonetheless, this typology needs revision (e.g., Cantor and Kenny 2001). For one brief example, the previous section noted the expansion of pluralistic approaches to religion brought by emerging adults: this reality presents an immediate general challenge to Barbour’s typology because spiritual bricolage may lead, for example, to conflicts with one aspect of science and independence from another. But there are broader and more global concerns surrounding this question. Where do emerging adults fit on this typology? Do they lean toward conflict or collaboration? One quickly learns that they fit uneasily in this dichotomy, but this also reveals something important: emerging adults perceive that there is conflict between science and religion in the wider culture, but they generally do not subscribe to this means of relating religion and science. They hear about conflict, but they seek collaboration or independence.

On the one hand, according to an important study of 2,381 18–23-year-olds by Kyle Longest and Christian Smith, 70% stated that they “agree” or “strongly agree” with the statement that the teachings of religion and science conflict. And more than half (57%) disagreed with the statement “My views on religion have been strengthened by discoveries of science” (Longest and Smith 2011, 846–69, especially 854). As one college student, Ericka, commented in an interview with me, “I think that science and religion will always be in conflict because science and religion will never be able to agree, and there are such contradicting views.” Apparently consistent with

Longest and Smith's findings, some students are hard-core adherents to the "warfare thesis," which was promoted in the late nineteenth century by such key texts as Andrew Dickson White's *A History of the Warfare of Science with Theology in Christendom* (White 1896) and William Draper's also best-selling *History of the Conflict between Religion and Science* (Draper 1874). Even though the concept of the warfare of science and religion has not fared well against an onslaught of scholarly critique (e.g., Ferngren 2002; Brooke 1991; Lindberg and Numbers 2003; Numbers 2010; Dixon, Cantor, and Pumfrey 2010), it does have adherents in scholarly work (Bénabou, Ticchi, and Vindigni 2013) and more popular treatments (Coyne 2015; Dawkins 2008). Even more, it has remarkable staying power in popular culture. In fact, one problem I am working to resolve is the disparity of why the warfare thesis has met considerable resistance academically, but seems to continue to thrive popularly.

It would seem then that the case for the conflict model among emerging adults is closed. There are, however, some competing data. Christopher Scheitle's analysis of the Spirituality in Higher Education Survey of 10,810 undergraduates arrived at seemingly opposite conclusion: "The analysis finds that, despite the seeming predominance of a conflict-oriented narrative, the majority of undergraduates do not view the relationship between these two institutions [religion and science] as one of conflict" (Scheitle 2011, 175). He found 69% of those surveyed agree that independence or collaboration is the way to relate religion and science. Even those that leaned toward conflict strike a noteworthy division between those who side with religion (17%) or side with science (14%) (Scheitle 2011, 178–79). Interestingly, this mirrors findings of attitudes of 1,646 scientists at 21 elite U.S. research universities by Elaine Howard Ecklund and Jerry Park. "In contrast to public opinion and scholarly discourse, most scientists do *not* perceive a conflict between science and religion" (Ecklund and Park 2009, 276).

How do we make sense of these competing claims? It appears to be a function of whether the question is about what is in the culture at large (Longest and Smith 2011) or about views that are personally held (Scheitle 2011). Here, the statement preceding the responses is critical. Scheitle analyzed the response to this statement, "*For me*, the relationship of science and religion is one of . . ." while Longest and Smith looked at the answer to this question: "*The teachings of science and religion* often ultimately conflict with each other. Do you strongly agree, agree, disagree, or strongly disagree? (I have added italics to both.) The first has a personal tone with the phrase "to me" and inquires about personally held attitudes. The second is more generally stated and asks about the "teachings of science and religion." Simply put, the majority of emerging adults (in this case, the segment 18–23 years old) sense that there is conflict in the wider culture, but they themselves seek another model.

I return to reasons to improve Barbour's typology. His category of conflict or even White's warfare thesis emphasize *material* conflict between science and religion. More often, however, the issue for emerging adults is *perception* of a clash between the two. I propose one reason. Even though there are statements from prestigious organizations—for example, the U.S. National Academy of Sciences that states, “Attempts to pit science and religion against each other create controversy where none needs to exist” (National Academy of Sciences 2015)—the discussion on the Internet (which powerfully affects the opinions of emerging adults) is largely hostile toward religious faith. As one post stated: “The Internet will kill religion.” And another opined: “Jesus will soon go the way of Zeus and Osiris.” And there is the series of memes like “Let me introduce you to my bronze-age sky god” when ridiculing Christianity and Judaism. In the Internet particularly, these comments create great “click bait,” provocative snippets of articles that demand our attention by their outrageous or adversarial claims. We are, it appears, naturally, neurologically stimulated by threat, novelty, and conflict. (Interestingly, this fact seems itself to have a scientifically discernable basis: human beings have evolved to be highly attuned to threats, through, among other systems, the stimulation of the amygdala in the limbic system.) Perhaps they have heard about the conflict between the two, or maybe they watched Bill Nye and Ken Ham on TV or some YouTube clips of Richard Dawkins. Another key problem here is that emerging adults don't seem to be aware of the key voices that present an integration of these disciplines, such as Francis Collins (2007) or Kenneth Miller (2007). For example, in their Religious Understandings of Science survey with 10,241 respondents from the general adult population (though, admittedly, not targeting emerging adults), Christopher Scheitle and Elaine Howard Ecklund found that only 4.3% had heard of Francis Collins as opposed to 21.4% who had heard of Richard Dawkins (Scheitle and Ecklund 2015, 7). In other words, the public is almost five times more likely to hear Dawkins's voice than Collins's and therefore to receive messages about conflict between science and religion.

Therefore, in light of this research, one can conclude that emerging adults are not as personally negative about the compatibility between science and religion; it is more that they have heard others argue for incompatibility. Though they know that warfare is in the air, many emerging adults, when asked, are not convinced this is the case. This all makes sense of the anecdotal evidence from conversations I and our SEYA partners had with emerging adults after various talks on religion and science.

More particularly, these conclusions are supported by the findings from our most complete SEYA study.³ This analysis brought together three surveys (my fall 2014 Chico State science and religion class; Columbia University discussion groups meeting in fall 2014; and post-college

emerging adult small groups convened in spring 2015 at Menlo Park Presbyterian Church). We tracked the responses of 93 pre- and 87 post-intervention emerging adults. (The intervention here is defined as a study and discussion of either the Faraday Institute's *Test of Faith* or Alister McGrath's *Science and Religion: A New Introduction*.) The study had participants rate their reactions on a scale of 1 to 5 and found that three constructs (out of six total) demonstrated statistically significant changes in attitudes.

- There were significant changes in construct 2, "I am turned off by the creation-versus-evolution debate," with the mean decreasing from 2.8 to 2.2 at posttest.
- There were significant changes in construct 5, "There are people in my faith or religious community who can point me toward resources which honestly address my questions, such as books and Internet resources, about science and faith," with the mean increasing from 3.6 to 4.2 at posttest.
- There were significant changes in construct 6, "My own views about spirituality/religious faith have been strengthened by some of the discoveries of science," with the mean rising from 2.9 to 3.7 at posttest. In contrast to the 57% in the Longest and Smith (2011) survey cited above (whose religious views were not strengthened by the discoveries of science), participants in our study experienced a genuine contribution to their spirituality or religious faith from the sciences.

These findings together indicate that the attitudes of emerging adults moved toward integration through an intervention with high-quality religion and science material.

Indeed, this conclusion correlates with one of the most consistent responses I received in interviews with students. Travis, after looking at the interaction of science and religion from the perspective of history and philosophical critique, concluded, "I'm really interested to hear from someone who's thought about these issues." In my experience and research, though many emerging adults may perceive conflict, they would like to hear thoughtful voices from either side that move beyond warfare. This generation has been fatigued by the culture wars.

CONCLUDING REMARKS

In this article, I have highlighted key areas in which 18–30-year-olds are changing, and will increasingly alter, the interaction of religion and science. I will offer concluding remarks around three themes, moving from more intricate analysis to sometimes hortatory simplicity: (1) formulating more

adequate theoretical models that countenance the increasing pluralism of “science and religion,” especially with the reality of spiritual bricolage; (2) articulating more clearly the way that conflict continues to define emerging adults’ perception of the interaction of religion and science, even though they personally seek collaboration or independence; and thus (3) further developing practical ways to take religion and science into a variety of venues and new topics in science and religion.

On the themes of pluralism and curating this conversation with religious bricoleurs, we do indeed need new theoretical models. Would it be possible to construct a religion and science model that is decentered and takes in the various slices of religion (not to mention the pluriform stands of science) which emerging adult spiritual bricoleurs bring? In my view, this task is still before us. I return to Whitehead (whose words began this article), who offers one framework. As Michael Welker describes Whitehead’s metaphysical model, it is both “polycontextual” (each context sets its own “relative actual world”) and “multiperspectival” (with no single perspective being privileged) (Cootsona 2001, which builds on Welker 1987). Further developing a similar polycontextual and multiperspectival model specifically addressing religion and science would be one contribution, which space does not allow me to develop. So I leave this as a note for further work.

Secondly, emerging adults’ attitudes certainly leaves room for those theorists and practitioners who promote the integration of science and religion, even in all its complexity. A recent survey by the Pew Research Center, which does not distinguish age demographics, suggests that the approach to religion and science that characterizes emerging adults (a majority perceives public conflict between the two, but a minority finds this true in their own lives) also describes, to some degree, the wider culture (Pew Research Center 2015). Nevertheless, it is accurate to assert that 18–30-year-olds are intensifying this trend, as the research above has shown, and that 18–30-year-olds represent a vanguard of emerging trends. It also implies that work in religion and science will find cultural traction as it presents new ways to move past the warfare/conflict thesis toward something more generative and integrative.

And so, this leads to my third point: conversations about religion and science certainly must continue to happen in traditional settings such as secular and religious colleges and universities, houses of worship, academic journals, and scholarly books. Nevertheless, it cannot take place only there. As I mentioned above, “the Internet” (meaning websites, YouTube clips, etc.) was a recurring answer to the question in my interviews, “Where would you go to find out more about religion and science?” (I am assuming in this assertion that excellent scholarship ought to affect the larger conversation.) In addition, topics previously presented as secondary will become primary. One that arose unexpectedly in my qualitative interviews is that emerging

adults believe that LGBTQ issues are clearly part of science and religion. To be clear, I am not asserting that there has not been excellent work done in journals, which are able to integrate developing topics more quickly (e.g., Fehige 2013), but that themes related to sexuality and gender, and their relationship to science and religion, have not made it into standard-length treatments of core issues in standard textbooks, which move more gradually (e.g., Richardson and Wildman 1996; Barbour 2000; Rolston 2006; Clayton 2008, 2012; McGrath 2010; Southgate 2011). In addition—and in agreement with recent comments by Willem Drees, technology is increasingly central to the science and religion dialogue: “The practice of science is culturally and technologically embodied . . .” (Drees 2013, 6). Thus, technology, such as cell phones, laptops, and tablets, must be increasingly at the forefront as we consider “science,” especially for emerging adults. In addition, I cannot help but mention the connections to transhumanism and posthumanism, as well as to artificial intelligence (AI). Recent films such as *Her* (about a man who falls in love with his operating system), and *Ex Machina* (about the creation of a beautiful, and ultimately dangerous, AI robot, Ava) are part of the landscape that affects emerging adults’ conceptions of science and religion. One could easily add the vision of Ray Kurzweil, who promotes a singularity where AI and human thinking will merge by 2045 (Kurzweil 2005, 136), let alone his ascension in Google’s ranks as director of engineering. Simply put, 18–30-year-olds have only known a technologically saturated world, and technology must be brought to the top three or four topics where formerly scientific and theological method, interactions with evolutionary biology, and cosmology have often appeared. I submit these as additional notes for further research.

The changes may appear unsettling to many who have worked in this field. As I reflect on Whitehead’s quote that began this article, it would be tempting to wish that *his* generation had indeed solved “the relations between” science and religion. But his did not, mine has not, and it is not clear that 18–30-year-olds will solve the relation either.

Nonetheless, emerging adults will move the conversation forward, and despite whatever problems and/or challenges lie ahead, the sketch of this variegated interaction of science and religion strikes me as more interesting than any simple caricature. At a minimum, we have to adjust our theoretical and practical models. The problems may, in fact, lead to more fruitful strategies for engagement. For theoreticians of science and religion, especially for those, like me, who advocate integrating the two, the climate is changing, and we would do well not to deny it.

NOTES

1. For some brief information on this project, which was made possible through the support of a grant from the John Templeton Foundation (JTF), see <http://www.scientistsincongregations.org/seya>. The opinions in this article are mine, not necessarily those of JTF.

2. For more information, see <http://www.testoffaith.com>.
3. Because these data are in a dynamic phase, in which more data sets are to be added, the questionnaire and the analysis can be found on the seya website, <http://www.scientistsincongregations.org/seya>.

REFERENCES

- Arnett, Jeffrey. 2000. "Emerging Adulthood: A Theory of Development from the Late Teens through the Twenties." *American Psychologist* 55:469–80.
- Arnett, Jeffrey, Marion Klepp, Leo B. Hendry, and Jennifer L. Tanner. 2011. *Debating Emerging Adulthood: Stage or Process?* New York, NY: Oxford University Press.
- Bagir, Zainal Abidin. 2015. "The 'Relation' between Science and Religion in the Pluralistic Landscape of Today's World." *Zygon: Journal of Religion and Science* 50: 403–17.
- Barbour, Ian. 2000. *When Science Meets Religion: Enemies, Strangers, or Partners?* New York, NY: HarperCollins.
- Bénabou, Roland, Davide Ticchi, and Andrea Vindigni. 2013. "Forbidden Fruits: The Political Economy of Science, Religion, and Growth." https://www.princeton.edu/~rbenabou/papers/Religion%20December%201g_snd.pdf.
- Brooke, John Hedley. 1991. *Science and Religion: Some Historical Perspectives*. Cambridge History of Science. Cambridge, UK: Cambridge University Press.
- Cantor, Geoffrey, and Chris Kenny. 2001. "Barbour's Fourfold Way: Problems with His Taxonomy of Science–Religion Relationships." *Zygon: Journal of Religion and Science* 36:765–81.
- Clayton, Philip, ed. 2008. *The Oxford Handbook of Religion and Science*. Oxford Handbooks. Oxford, UK: Oxford University Press.
- . ed. 2012. *Religion and Science: The Basics*. London, UK: Routledge.
- Collins, Francis. 2007. *The Language of God: A Scientist Presents Evidence for Belief*. New York, NY: Free Press.
- Cootsona, Gregory S. 2001. *God and the World: A Study in the Thought of Alfred North Whitehead and Karl Barth*. Internationale Theologie, Vol. 6. Bern, Switzerland: Peter Lang.
- Coyne, Jerry. 2015. *Faith Versus Fact: Why Science and Religion Are Incompatible*. New York, NY: Viking.
- Dawkins, Richard. 2008. *The God Delusion*. New York, NY: Mariner.
- Dixon, Thomas, Geoffrey Cantor, and Stephen Pumfrey, eds. 2010. *Science and Religion: New Historical Perspectives*. Cambridge, UK: Cambridge University Press.
- Draper, William. 1874. *History of the Conflict between Religion and Science*. New York, NY: D. Appleton & Co.
- Drees, Willem B. 2013. "Techno-Secularity and Techno-Sapiens: Editorial for *Zygon's* First Real Virtual Issue." *Zygon: Journal of Religion and Science* 48:5–7.
- Ecklund, Elaine Howard, and Jerry Z. Park. 2009. "Conflict between Religion and Science among Academic Scientists?" *Journal of the Scientific Study of Religion* 48: 276–92.
- Fehige, Yiftach. 2013. "Sexual Diversity and Divine Creation: A Tightrope Walk between Christianity and Science." *Zygon: Journal of Religion and Science* 48: 35–59.
- Ferngren, Gary B., ed. 2002. *Science and Religion: A Historical Introduction*. Baltimore, MD: Johns Hopkins University Press.
- Geertz, Clifford. 1973. *The Interpretation of Cultures*. New York, NY: Basic Books.
- Ha, Minsu, David L. Haury, and Ross H. Nehm. 2011. "Feeling of Certainty: Uncovering a Missing Link between Knowledge and Acceptance of Evolution." *Journal of Research in Science Teaching* 49:95–121.
- Hill, Jonathan. 2014. "National Study of Religion and Human Origins." <http://biologos.org/uploads/projects/nsrho-report.pdf>.
- . 2015. *Emerging Adulthood and Faith*. Grand Rapids, MI: Calvin College.
- Keller, Catherine. 2015. "Theology's Multitude: Polydoxy Reviewed and Renewed." *Modern Theology* 30:127–39.
- Keller, Catherine, and Laurel C. Schneider, eds. 2010. *Polydoxy: Theology of Multiplicity and Relation*. New York, NY: Routledge.
- Kinnaman, David, and Aly Hawkins. 2011. *You Lost Me: Why Young Christians Are Leaving Church . . . and Rethinking Faith*. Grand Rapids, MI: Baker.

- Kurzweil, Ray. 2005. *The Singularity Is Near*. New York, NY: Penguin.
- Lindberg, David C., and Ronald L. Numbers, eds. 2003. *Where Science and Christianity Meet*. Chicago, IL: University of Chicago Press.
- Longest, Kyle, and Christian Smith. 2011. "Conflicting or Compatible: Beliefs about Religion and Science among Emerging Adults in the United States." *Sociological Forum* 26:846–69.
- McGrath, Alistair. 2010. *Science and Religion: A New Introduction*. 2nd edn. Oxford, UK: Wiley-Blackwell.
- Miller, Kenneth. 2007. *Finding Darwin's God: A Scientist's Search for Common Ground between God and Evolution*. New York, NY: Harper Perennial.
- National Academy of Sciences. 2015. Evolution Resources, "Compatibility of Science and Religion." <http://www.nas.edu/evolution/Compatibility.html>.
- Numbers, Ronald, ed. 2010. *Galileo Goes to Jail and Other Myths about Science and Religion*. Cambridge, MA: Harvard University Press.
- Pew Research Center. 2015. "Religion and Science: Highly Religious Americans Are Less Likely than Others to See Conflict Between Faith and Science." <http://www.pewinternet.org/2015/10/22/science-and-religion>.
- Richardson, Mark, and Wesley J. Wildman, eds. 1996. *Religion and Science: History, Method, Dialogue*. New York, NY: Routledge.
- Robbins, Alexandra, and Abby Wilner. 2001. *Quarterlife Crisis: The Unique Challenges of Life in Your Twenties*. New York, NY: Jeremy P. Tarcher/Putnam.
- Rolston, Holmes, III. 2006. *Science and Religion: A Critical Survey*. West Conshohocken, PA: Templeton Press.
- Scheitle, Christopher P. 2011. "U.S. College Students' Perception of Religion and Science: Conflict, Collaboration, or Independence? A Research Note." *Journal for the Scientific Study of Religion* 50:175–86.
- Scheitle, Christopher P., and Elaine Howard Ecklund. 2015. "The Influence of Popularizers on the Public's View of Religion and Science: An Experimental Assessment." *Sage Journal* (online), <http://pus.sagepub.com/content/early/2015/06/05/09636625155884-32.full.pdf+html>.
- Setran, David P., and Chris A. Kiesling. 2013. *Spiritual Formation in Emerging Adulthood: A Practical Theology for College and Young Adult Ministry*. Grand Rapids, MI: Baker.
- Smith, Christian, Kari Christoffersen, and Hillary Davidson. 2011. *Lost in Transition: The Dark Side of Emerging Adulthood*. Oxford, UK: Oxford University Press.
- Smith, Christian, and Patricia Snell. 2009. *Souls in Transition: The Religious and Spiritual Lives of Emerging Adults*. Oxford, UK: Oxford University Press.
- Smith, Jonathan Z., and William Scott Green. 1995. *The Harper Collins Dictionary of Religion*. New York, NY: HarperCollins.
- Smith, Wilfred Cantwell. 1991. *The Meaning and End of Religion*. Minneapolis, MN: Fortress Press.
- Southgate, Christopher. 2011. *God, Humanity, and Cosmos: A Textbook in Science and Religion*. 3rd ed. London, UK: T&T Clark.
- Welker, Michael. 1987. "Alfred North Whitehead's Basic Philosophical Problem: The Development of a Relativistic Cosmology." *Process Studies* 16: 1–25.
- White, Andrew Dickson. 1896. *A History of the Warfare of Science with Theology in Christendom*. Vol. 2. New York, NY: D. Appleton & Co.
- Whitehead, Alfred North. [1926]1967. *Science and the Modern World*. New York, NY: Free Press.
- Wuthnow, Robert. 2007. *After the Baby Boomers: How Twenty- and Thirty-Somethings Are Shaping the Future of American Religion*. Princeton, NJ: Princeton University Press.