

FORTY YEARS OF SCIENCE AND RELIGION

LOOKING BACK, LOOKING FORWARD

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CHAPTER FIFTEEN

WHAT DO TEENAGERS BELIEVE ABOUT THE SOUL?

FINDINGS FROM A SURVEY AND INTERVIEW STUDY WITH UPPER SECONDARY SCHOOL STUDENTS

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Introduction

This conference was an invitation to look at the past, present, and future of the science and religion dialogue. In the context of school education, the future is the next generation and the quest is to develop and establish more effective ways to ensure that young people have the support and insights they need to engage actively with the big questions of human existence. An important question to ask in this field is to what extent young people are in a position to make progress in their understanding of the relationships between science and other disciplines.

The question matters because many of the problems that concern individuals and society can neither be fully addressed by science nor are completely unrelated to science. Theologians, scientists and philosophers have insights into the natures of science and religion which enable them to consider why the two are not necessarily incompatible. In secondary schools internationally, however, the lessons for each curriculum subject are typically focused on the questions, methods and norms of thought associated with one discipline (Billingsley, Riga, Taber and Newdick 2014). Consequently opportunities for students to consider cross-disciplinary questions and to develop interdisciplinary insights tend to be limited. Previous research has studied students' reasoning about the

origins of the universe and of life and has shown that they frequently hold narrow and even misconstrued perceptions of science and religion, and as such are blocked from accessing the range of positions that scholars take (Billingsley, Taber, Riga, and Newdick 2013).

For students to make progress in their understanding of the relationships between science and religion, they will need to consider different scholarly positions on the nature of science and the types of questions science can address. A focus in science lessons on teaching concepts via closed, so-called "recipe experiments", has led several generations of students to perceive science as a boundless set of experimentally proven facts (Tytler 2007). A period of curriculum reform in England and elsewhere has attempted to shift students' perceptions of the nature of science (Taber 2007). While these reforms have had some effect on teachers' practice, most teachers remain reluctant to look at topics that bridge disciplines and to discuss why some questions are more amenable to science than others (Lederman, Antink, and Bartos 2014).

The focus of our current project is to discover students' perceptions of what it means to be human, and particularly to discover how they conceptualise and reason about the soul. We focused on the concept of the soul for three main reasons. Firstly, the soul is frequently a central focus in scholarly debates that consider what it means to be human in the age of neurosciences and genetics. Secondly, students in the selected age group (upper secondary) have science lessons about the factors which affect human behaviour, and these ideas have the potential to conflict with some conceptualisations of the soul. Thirdly, we surmise on the basis of existing research that media reporting of scientific advances has the potential to influence what students believe about the soul. In particular Racine and colleagues (2010) identify "neuroessentialism" as an emerging trend in media interpretations of neuroimaging, where neuroessentialism refers to depictions of the brain as the essence of a person, with the brain a synonym for concepts like "person", "self" or "soul". It seems reasonable to say that secondary students are likely to encounter headlines like "it's all in your genes" or "we're just a bundle of neurons", which are not uncommon in media reports. Our expectation is that these types of reports both influence and also raise questions for students, and we are looking to discover what types of questions are raised and what kinds of reasoning students use when they formulate their positions.

To build our understanding of students' beliefs about the soul and their perceptions of what, if anything, science says about the soul, we carried out a survey with 590 students in Years 9-12 (age 14-17) from eight secondary schools, including some faith-affiliated and some independent

schools. The survey was designed as a series of statements each with a set of options (“agree”, “neither agree nor disagree”, “disagree”, “I don’t understand the question”). Students were provided with a space under each statement where they could write a comment.

We also conducted in-depth interviews with 25 students in Years 10-11 (aged 15-16) in four schools in the South of England: a non-Church, independent school; a non-Church, girls’ community school; a Church academy and a Church boys’ academy. Participants were recruited from the respondents of the initial survey on the basis of their willingness to participate in the next stage of the research. Participants included both students who self-identify as religious and those who self-identify as non-religious. In the quotations, students’ names are replaced with pseudonyms. The interview transcripts and students’ comments in the survey were analysed to construct a picture of students’ perceptions of the attributes of the soul and also of their uncertainties and predicaments. These are the data and discussions we focus on here.

Findings and Discussion

The survey revealed that a significant proportion of the participating students perceive belief in a soul to be incompatible with a scientific worldview. In particular, one of the statements in the survey was “The scientific viewpoint is that the soul is not real”. Of the students responding to the survey, two fifths (42%) agreed with this statement while one fifth (18%) disagreed. Another statement was, “Science is compatible with religious ideas about the soul”. We found that one fifth of students (21%) agreed with this statement while 36% disagreed.

Teenagers’ positions on the soul are thus diverse, but underpinning this diversity of beliefs there are some commonly identified attributes of soul and some commonly expressed contentions between what science and religion are perceived to say.

a) Attributes of the soul

We noticed that, although students described the soul in many different ways, there were some attributes and characteristics that were cited by several participants. Broadly speaking, and whether or not they themselves believed in the soul, students said of the soul that it is the source of free will and your conscience, it is eternal, it is what makes you “you” and is the source of your personality, it carries your aspirations and values, it makes humans different from other animals, and it is like the mind;

although it must be acknowledged that not every student asserted all attributes and characteristics. For many students it was felt to be important that the soul is not part of the regular physical universe and as such can leave the body at death. As one student commented on the survey, “Religion says that the soul can exist without the body so they must be separate” and another commented, “I believe the soul is within the human body but when you die the soul lives on”. Several students said that since the soul is not physical, it is outside science to explain, for example, “The soul is only explained in religion as it is a supernatural thing rather than a physical thing”. Students who identified themselves as religious were more likely to also reference attributes such as: “It goes up to heaven”; “it contrasts with instincts”; “it is pure and tries to get rid of sin”; “it is the link between the person, the Holy Spirit and God”; “it is given to humans by God”.

b) Reasoning about whether and why the existence of the soul is contested

It was clear from the interviews that students widely felt that belief in the soul is attractive but also difficult to defend. We noted that students frequently used words like “belief”, “story”, “idea” and “hope” to explain the uncertain status of the soul. Kiara (age 15) explained that the idea of the soul is “like a story book”.

I think I have a soul. I think my soul is my conscience and, sometimes, my choices and, I think, if I was to die, I think people enjoy thinking that you’re going to live on through your soul and your conscience—that’s sort of where your personality comes from and is carried with you wherever you go. But, I think that’s quite romantic, isn’t it? [laughs] I think, a lot of what I believe, I believe because you don’t want to believe that you’re just going to—a soul is such a lovely idea and even though someone doesn’t have a soul—it all sounds so like a story book, you know. I’d like to think I have a soul, yeah.

In their reasoning about why the existence of the soul is contested, the idea that it is not physical was often mentioned. David (age 15) contrasts the physical body with his conception of a soul and concludes that he cannot justify belief in a soul: “I would like to think there is a soul, I would. Because it gives you a sense of, when you die it’s not all over. That’s not it, it’s just the beginning. But, I think deep down, I think we don’t have a soul. I think it’s just the physical body”.

In their reasoning many students also linked the question of whether to believe in the soul to the question of whether anything exists beyond the physical universe, such as, "I think that the physical reality is all there is and we don't have a soul". Some students were uncertain about the nature of reality: "I don't know what I think about souls or whether there is other reality except physical". As such students are grappling with the nature of the soul (is it physical?) and also the nature of reality (can there be anything that is not physical?).

The notion of how, if at all, to prove the existence of the soul was raised by many students. One wrote on the survey, "I am quite the materialist. I do not believe in things I have not seen proof for. Although there may indeed be a god as I have not seen anything to disprove his existence, I believe that something does not exist until there is proof that it does". There were also students who argued that there is evidence for a dualistic soul, with such comments as "I think evidence of "out of body experiences" may support the theory of an exterior soul, and dualism".

c) Perceptions of direct challenges from science

Our analysis of the interviews indicated that many students perceived that science and scientists accept that something exists only if it can be observed directly and there is physical evidence or "proof" that it exists. Kitty (age 14) said, for example, "science doesn't really think that there is a soul [...] because, well science is all about elements and substances, but the soul doesn't really have any substance to it, so they [say] it can't really exist". Nyah (age 15) also felt that scientists would reject the premise of the soul:

[Scientists] would say: "in my opinion, [the soul] doesn't exist". They would say that the soul is a very, the soul is a concept that religious people use and it gives a hope for afterlife. It's a comfort, it's not really real, to be honest it's made up to comfort people.

The survey comments also provided many examples of students saying that science and scientists require proof before they accept that something exists: "Scientists do not believe in anything that they can't prove therefore can never really believe in God". There were also some students who argued that scientists have a range of positions: "science is bigger than just one thing, it's made of scientists who have different ideas".

Another perceived challenge from science concerned whether aspects of human personality could be attributable to the soul or attributable to the physical person. For example one student commented, "Science has

evidence that our consciousness is from our brains, but religion says it's from our soul". For many of those who saw the supernatural soul as separate from the physical brain, this meant there were two parallel and competing ways to account for human attributes such as feelings, aspirations, agency, consciousness and conscience. Another student wrote,

I am not sure whether we have a soul, I would like us to live on after death through our souls and dwell in heaven but I find it too unbelievable in terms of science that we have a separate conscience when we have discovered so much about how our brain functions biologically.

Another wrote, "I believe there is a soul inside of us which science doesn't agree with". In contrast, some students argued that the soul accounts for aspects of being human that we cannot explain, e.g. "I believe that we will never be able to fully explain the feelings and emotions of humans as they are so complicated".

d) Students' perceptions of the power and limits of science

The idea that the soul is not physical is important to students for a number of reasons. In students' perceptions of reality, if humans do not have supernatural souls, then they are fully immersed in the physical universe that science describes. Science is associated with a paradigm that dismisses the possibility of a spiritual dimension of life—"We're told we're just the activity of carbon and some proteins". If there is no supernatural soul, the perception is that the person exists only because of evolution (which is perceived as atheistic). "Science states that the purpose of life is to survive and pass on the genes of the parents to ensure the species survives". The essence of personality is no longer spiritual and coherent throughout life; it is now fragmented into genes, brain cells and neurochemicals. "There's no evidence for the supernatural soul. Humans evolved through the same process as animals and carry out most of the same processes as animals. Not to mention that humans and animals both have the same capacity to feel pain and other sensations". The universe has no meaning and its operations are caused by disinterested mechanisms. There is confusion too about whether humans are markedly different from other animals, "Overall I am confused over what is right. Seeing what humans have built compared to the feats of other animals I must admit that we are special".

Students responded to this dilemma in different ways. Some students explained that there are no limits to the capacity of science to explain human experience, "I think that science will be able to explain almost

everything, if not everything about the human body in the near future”. Some accepted what they described as the only rational belief: “Although it would be nice to know that us humans have an ultimate purpose and we are not simply here to survive; I think the reality is that we are no more or less special than any other living thing in the world, we are just a small part of evolution”. Many other students rejected what they perceived as the scientific view on the basis that it didn’t seem to explain their personal experiences of reality: “We have strange impulses such as love, compassion and others that can go against our basic survival instincts which science cannot explain. Science shows the brain as an emotionless computer but there is clearly something more to it”. We also noted comments by some students who said that science is only a part of a bigger picture: “I like to believe that science can’t tell us everything and that we humans are more than just facts and figures”.

Conclusion

Students’ perceptions of the attributes of the soul are some or all of the following: “It is the source of your personality, capacity to make choices, moral compass, aspirations, a way to relate to God and a basis on which to believe a person can be eternal”. We noted from their interviews and survey comments that the existence of the soul matters to many teenagers but also that they perceive it to be a difficult idea to defend in the light of science. The notion of soul was connected for many students with a reality that is coherent and invested with meaning. We also found that students tended to associate a scientific worldview with physical reductionism.

These findings seem to us to be important to consider in relation to curriculum design and planning, particularly as students currently have few opportunities in school to look at topics and questions that bridge the disciplines. In the follow-up work we are carrying out now, we are developing and trialling workshops designed to give students opportunities to consider different positions on the perceived contentions and questions that have emerged from the study. The workshops we are designing include some that are focused on questions we have explored with students in our previous research. An example is a cross-curricular session on evolution, in which students critically examine whether evolution is necessarily atheistic. We are also developing workshops which aim to encourage students to explore the relationships between contemporary biology and different perspectives on the soul.

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