



## INTERNATIONAL RESEARCH NETWORK FOR THE STUDY OF SCIENCE & BELIEF IN SOCIETY

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### **Abstracts**

**Adamczyk, Amy;**

*A cross-national analysis of the relationship between religion and reproductive technology*

Science and technology have made major contributions to people's ability to reproduce. With the advances made to reproductive health people are able to control when and how many children they have and they are able to conceive, even if their biological health is waning. Major debates have erupted over the ethical issues related to abortion and in vitro fertilization. While religion is often used to support various claims about the morality of controlling people's reproductive behaviors, very few studies have investigated how individuals from different religious backgrounds and the religious context of a nation shape the extent to which residents view abortion and in vitro fertilization as being part of the same dimension. Moreover, in addition to religion, other cultural and structural characteristics, such as economic development, fertility rates, and democracy are also likely to play a role in shaping views. Drawing on data from the World Values Surveys, which includes dozens of countries, and mixed modelling techniques, this study examines the individual and country-level characteristics shaping views about abortion and in vitro fertilization to assess the extent to which similar factors shape how people view these issues. The findings will focus on how the dominant religion and overall levels of religious engagement and belief shape attitudes, as well as other country-level structural and cultural factors shape attitudes about reproduction. Special attention is given to the moderating role of the country religious context for shaping the relationship between personal religious beliefs and attitudes regarding in vitro fertilization and abortion. This research will provide much needed insight into the extent to which religion is important for shaping attitudes about reproduction and the extent to which other factors have an influence.

**Ahmed Malik, Shoaib;** Zayed University

*Islam and Evolution – Mapping the Interdisciplinary Dimensions.*

Islam and evolution is a very sensitive subject for most Muslims and surveys indicate that many see the two as being irreconcilable. Accordingly, such individuals see this discourse as a binary choice: either leave Islam or reject evolution. The underlying problem with this approach is that it neglects the various sub-discussions that require further deliberation to make an educated opinion. The interdisciplinary nature of the conversation creates a major obstacle for many young Muslims, particularly laypeople. Additionally, due to the hyper-specialisation of education, it is not surprising to see educated philosophers, theologians, and scientists to sometimes speak past one another. This article intends to alleviate this problem by creating a heuristic map within which the conversation is compartmentalised into three knowledge domains. These include 1) science, 2) metaphysics and 3) hermeneutics. After introducing this division, I then intend to illustrate the kind of issues that are

specific to each knowledge domain for the topic of evolution in relation to Islam, i.e. intradisciplinary. I will then illustrate how one can manage this triangular, interdisciplinary relationship by summarising the thoughts of three thinkers, two who argue for human creationism and one for evolution. These include Rana Dajani, a molecular biologist who accepts human and non-human evolution; Nuh Keller, a Muslim theologian who accepts non-human evolution but rejects human evolution; and Seyyed Hossein Nasr, a professor of Islamic studies who rejects human and non-human evolution. These particular thinkers are chosen because they each stress on a particular domain without carefully reviewing nor appreciating the nuances from the others. This makes them perfect case studies for when explaining how the conversation cannot be needlessly simplified. Finally, this article doesn't intend to provide a normative framework on how to manage the relationship between the three domains but instead provides educators with tools and ideas that they can use to develop students' understanding without resorting to simplistic binaries given the nuances of each discipline.

**Amadi, Luke;** Kingsley Ozumba Mbadiwe University, Nigeria

*Religious Radicalism and Western Scientific Education : Boko Haram in Northeast, Nigeria in perspective*

The term 'Boko Haram' literally means "Western Education is forbidden". This has been a philosophy driving its fundamentalist identity and terrorist attacks in northeast, Nigeria since 2009. The attacks are exemplified in abduction of school children, killing of teachers, burning down of schools and propagation of radical religious philosophy across the Northeast and the Lake Chad basin. It appears that formal scientific education is threatened. This study aims to make a new contribution in religiosity and formal scientific education study. The central objective is to demonstrate how radical religious worldview constricts western education and how such contention could offer an understanding of the study of the relationship between formal education, religion and belief system in the society. It argues that despite a considerable and diverse literature on the identity, philosophy and worldview of the radical group, including questions of branding western education as abomination, the social scientific and historical study of the relationship between scientific Western education and religious fundamentalism are still scant. Importantly, the broader landscape within which the impact of religious fundamentalism on Western education is situated is rapidly changing, bringing new challenges to the understanding of the scope and mode of operation of Boko Haram terrorism. We propose a research agenda centered on a transformative approach to radicalism, placing analysis of terrorism in its various guises at the center of its enquiry, and advancing beyond existing perspectives by focusing on the social and institutional relevance of formal scientific education. The paper elaborates on inclusive and equitable education that could impact the society.

**Anisman, Hymie – See Tippins, Emily;** Carleton University

**Annunen, Linda;** Åbo Akademi University

*Between secular and spiritual learning: Scientific and spiritual discourses in singing bowl sound healing*

This paper studies the combination of secular and non-secular interpretations within the practice of singing bowl sound healing, a form of holistic spirituality where sound is used to promote relaxation and overall well-being and health. Singing bowls are increasingly gaining popularity as therapeutic instruments and they are frequently also combined with popular well-being practices such as yoga and meditation. The familiarization with singing bowl sound healing usually takes place through introductory workshops and courses. Furthermore, such courses often incorporate different kinds of study materials – for example, course manuals, through which the participants gain deeper knowledge about the practice. Almost any workshop, course or book on sound healing will certainly include a part dedicated to scientific explanations addressing the benefits and effects of the singing bowls. Usually, they incorporate theories from neuroscience, psychology, biomedicine, and physics and address topics such as hearing, soundwaves and frequencies. However, scientific theories and rhetorics are mostly presented and discussed alongside mythological narratives and descriptions of the singing bowls' abilities to produce extraordinary experiences and altered states of consciousness. The singing bowls therefore represent a popular well-being practice situated in the borderline of spirituality and secularity, where multifaceted and adjustable interpretations of the world come into play. I will discuss how this interplay between science and belief affects processes of learning within singing bowl sound healing. The analysis addresses ethnographic data, gathered through participant observation, interviews and close reading of singing bowl course materials within the theoretical framework of formal and non-formal learning (Rogers 2014).

**Barker, Sally;** University of Maine

*The Impact of Identity Salience on perceptions of the Religion-Science Relationship*

How do people's social identities as a "scientist" or "religious person" inform perceptions of the science-religion relationship? Does asking participants to reflect on a scientific or religious identity to make identity temporarily more salient change perceptions of the science-religion relationship? Considering science (McDonald et al., 2019) and religion (Sharp & Leicht, 2020; Ysseldyk, Matheson, & Anisman, 2010) in terms of social identities may provide a more nuanced view of the complex perceptions of the science-religion relationship. Some functions of religious identity (e.g., believing, belonging, behaving, and bonding; Saroglou, 2002) are shared with science and mirrored in the practice of science and scientific identity (McDonald et al., 2019). In some domains, science seems to share characteristics with religion. In other domains, science is more directly religion's competitor. Treating science and religion as social identities that people belong to instead of beliefs or practices may provide a clearer understanding of the domains in which science and religion conflict.

In a mixed-methods study (N = 511), we examine the effect of experimentally priming social identities of "religious" and "scientist" on perceptions of the science-faith interface (Ecklund et al., 2016) and science and religion compatibility (Leicht, Sharp, LaBouff & Baker, 2020). Participants who identify as religious and work in a science sector were asked to reflect on their identities and imagine scenarios that highlight their identity as a scientist, religious, or both social identities. We hypothesize that increasing the salience of science social identities will increase perceptions of conflict, whereas increasing the salience of religious identities or both identities will reduce perceptions of conflict. We will discuss the implications of how social identities impact perceptions of identity-relevant domains and worldview compatibility.

**Barnes, Joel;** University of Queensland

*From materialism to vitalism: Narratives of the history of evolutionary biology among twentieth-century Australian scientists*

This paper explores narratives of the history of evolutionary science among scientists holding theistic evolutionary beliefs in mid-twentieth-century Australia. As the historian of medicine Adrian Wilson has argued, from the scale of the literature review upwards, doing science entails writing history. Scientists construct pasts that frame the work they are engaged in, shaping the meanings embedded within it. Such narratives thus form part of the motivating and legitimating intellectual architecture of scientific practice. In the mid-twentieth century—that is, from the time of the consolidation of the modern evolutionary synthesis, and before the emergence of the ‘Darwin Industry’ and the contemporary creationist and Intelligent Design movements—a common scientists’ narrative of the history of evolution centred around a shift from a nineteenth-century ‘materialist’ or ‘mechanistic’ science to one in which forms of theistic vitalism were increasingly recognised. This narrative was particularly associated with those who held ‘pansubjectivist’ or ‘panentheistic’ views inspired by philosophers such as A.N. Whitehead and Pierre Teilhard de Chardin. In this view, nineteenth-century evolutionists such as Charles Darwin, T.H. Huxley and Ernst Haeckel had offered crudely mechanistic explanations of evolution, but developments in physics and biology, such as the modelling of the structures of the atom and of microorganisms, opened space for a vision of the universe in which purposeful design was embedded at an elementary level. This narrative was interwoven with a more familiar one internal to the history of science, of a shift from nineteenth-century Darwinism to the modern synthesis. Special attention will be paid to the writings of Frederic Wood Jones (1879–1954), professor of anatomy at Adelaide and Melbourne, and Charles Birch (1918–2009), professor of biology at Sydney, who towards the respective end and beginning of their careers elaborated detailed versions of this narrative of the history of evolutionary biology.

**Benyah, Francis;** Åbo Akademi University

*Prayer Camps: An Emerging Borderland of Health Care for Psychiatric Patients in Ghana?*

The operations of prayer camps or Pentecostal healing centres as treatment centres for individuals suffering from mental illnesses have raised several concerns among health care professionals, clinicians, and human rights activists. At the prayer camps, the pastor-prophets, through religious prognostication, diagnose the perceived causes of mental illness and attempt to heal the person through healing rituals such as prayers, fasting, counselling, etc. Despite the concerns of the viability of the role of religion and/or faith-based approaches to the treatment of mental illness, what is fascinating, however, is the integration or harnessing of both faith-based resources and biomedicine for the care of mental health patients at some prayer camps in Ghana. This paper complicates the current network of relationship between prayer camps and psychiatric units of district and regional hospitals as well as psychiatric hospitals in Ghana. The paper argues that the current and ongoing partnership and collaboration between mental health hospitals and prayer camps postulate the importance of faith and belief in the face of the development of science and technology for the care of the sick in modern societies. The paper further argues that these vectors of health care places the sick person and their culture and beliefs at the centre of treatment. It provides a basis for negotiation between different healing spaces – faith healing and biomedicine for effective health care and at the same time, help in the development of cultural competence by clinicians in their field of practice. The paper is based on six months’ intensive fieldwork in Ghana.

**Bolzonar, Fabio;** Université Libre de Bruxelles

*Common Anthropological Concerns and Different Answers. A Comparison of the Catholic, Jewish, and Islamic Approaches to Surrogacy*

The dramatic advances in biosciences have opened highly divisive debates and have become a terrain of confrontation between religious authorities and secular political elites committed to liberalizing national laws. Through their engagement in bioethical debates, religious leaders have not only sustained religious norms in our increasingly secularized societies, but they have also taken a public role to defend ethical values supposedly threatened by the unregulated use of biotechnologies. One of the most controversial issues in biosciences is surrogacy, a practice that challenges traditional conceptions of motherhood, kinship, and the family. Although surrogacy can promote reproductive justice by weakening the biogenetic ties for family formation and opening parenthood to previously excluded people, it has also engendered new forms of exploitation of women, notably in poverty-stricken countries. In consideration of the questions at stake, religious authorities have not hesitated to present their positions on surrogacy. Through the study of doctrinal documents and public statements of religious leaders and bioethicists, this paper discusses and compares the doctrinal and ethical stances of the Roman Catholic Church, Muslim scholars, and Jewish thinkers on surrogacy. Although Roman Catholicism, Judaism, and Islam share a common concern for the welfare of women and the well-being of the child, they diverge on the ethical arguments that they propose to justify the prohibition of surrogacy, the conception of women's freedom of choice on reproductive matters, and the role played by science in human reproduction. The paper aims to present a comparative perspective on the current religious understandings of surrogacy, without neglecting the internal dissenting voices in religious traditions, to highlight the ethical principles that inspire the positions of Catholic, Jewish, and Islamic religious authorities on the advances in assisted reproductive technologies.

**Bossoh, Nathan;** University College London

*Divine Anthropology and the Uses and Evolution of 'Degeneration' Arguments in 18th and 19th Century Racial Theorizing*

Since the time of the Ancient Greeks climate difference has always served as a ready answer to the question of human degeneration. Aristotle himself argued that the climate of Asia made Asians "deficient in spirit", whereas the climate of Greece empowered Greeks with both "spirit and intelligence". By the eighteenth century European natural historians and anthropologists continued to utilize climate to explain perceived cases of degeneration, the two most common being 'New World deficiency' and 'blackness', yet mounting challenges to these views meant that by the early 1800s they were in decline. In this paper I explore the complexities and continuities that remained present between eighteenth and nineteenth-century racial anthropological theorizing. I argue that during the 1800s degeneration theories evolved from climate-induced explanations of blackness and New World deficiency into socially-induced explanations of degeneration which had the added benefit of increasing human agency. Crucially, as we will see, degeneration theories throughout this period were explicitly (or implicitly) embedded in theological assumptions regarding the original unity and sacredness of all humans. During the nineteenth century, climate differences would continue to be presented as a cause of degeneration for some societies but whereas in the 1700s it was common to tie the effects of climate difference to New World deficiency and blackness, by the 1850s climate difference was conceived of as only one global factor among numerous equally

important social factors and it was no more linked to skin colour. African Europeans including Equiano Olaudah, Africanus Horton, and Frederick Douglass were integral to this shift and as such, in this paper I demonstrate how Africans were not simply passive characters but active shapers of anthropological evolution.

**Burney, Saleema;** University of Birmingham (co-authors: **Stephen H. Jones and Riyaz Timol**)

*Remaking Networks and Developing Discourses: Negotiating Islam and Science within British Muslim Educational Institutions*

Britain's Islamic educational institutions, which are one of the country's main suppliers of Muslim religious leaders, emerged in the 1980s and 1990s out of strong diasporic connections, with many being set up to transmit South Asian or Middle Eastern intellectual lineages to younger generations of British-born Muslims. Over the last twenty years, however, there has been significant reform in the sector, with new connections being built between Islamic institutions and mainstream UK universities and colleges (Gilliat-Ray, 2018; Jones, 2021). Against this backdrop, this paper examines how Muslim leaders negotiate the boundary between Islam and science and, in turn, between secular and religious institutional settings and public domains. Based on the initial findings of a new qualitative study of perceptions of Islam and science among British Muslim religious leaderships, the paper highlights how the increasing open ended-ness of British Islamic educational institutions has led to a blurring of boundaries between Islamic groups and even, in some cases, a process of delinking from traditional movements. This, in turn, has facilitated the reconstitution of intra-Muslim networks of debate about science and Islam, with networks and authority claims about evolution or organ donation opening up across global spaces. We also note, however, that this encouraging turn is not yet mirrored in secular public spaces that Muslims occupy; particularly in scientific workplaces, people of faith still face significant prejudice and misrepresentation.

**Cabral, Marcelo;** Unicamp

This paper aims at briefly presenting applications of the field of virtue epistemology on issues of mainstream science acceptance and denialism among religious groups. It also presents intellectual virtues and vices as a rich epistemic tool-box for developing initiatives to enhance agent's understanding of contemporary epistemic enterprises, such as modern science. While virtue and vice epistemology comprise a wide range of approaches, the field is united in a turn of the foci of epistemic evaluation from propositional statements to the intellectual traits that epistemic agents display in their cognitive attitudes. Moving beyond the description of the nature of knowledge and traditional epistemic problems (such as foundationalism versus coherentism, etc.), virtue epistemologists have presented several analyses of individual intellectual virtues and vices, their inner psychological structure, their relation to good motivations and emotions, and their connection with the production, distribution, and application of intellectual goods – such as knowledge, understanding, and wisdom. One very interesting application is in empirical studies, aiming at measuring virtues and vices in individuals and communities. Intellectual virtues such as open-mindedness, curiosity, intellectual humility, and intellectual vices such as closed-mindedness, dogmatism, intellectual arrogance – among many others – are now not only philosophically discussed, but also empirically studied and analyzed, constituting a burgeoning field in empirical psychology and social studies. We defend that rigorous empirically-grounded theoretical discussions on these topics may help relating macro level (societal) phenomena to its micro/meso-level

important expressions and foundations. Using this framework of analysis, we hope to contribute to a discussion of the reasons why some religious groups seem to have a more positive attitude towards accepting and valuing established scientific knowledge while others do not, and to think of strategies as to foster the appreciation, cherishing and valuing of intellectual virtues and their positive impact in bridging religious communities to the sciences.

**Cazarin, Rafael; and Delgado-Molina, Cecilia;** Autonomous University of Barcelona

*The emotional markers of political controversies at the intersection of science and religion in Spain*

Nowadays, Spain is a democratic political system facing an advanced process of secularization that pushed religion to the private sphere. However, the rise of conservative ideologies coupled with existing political debates on sexual diversity, abortion, euthanasia and, more recently, vaccines created new intersections between religion and science. Departing from this scenario, our research focuses on analyzing how scientists from bio-medical disciplines face, and make sense of, contentious sociopolitical debates at the intersection of science and religion; and how do they place themselves, and their knowledge, within the broader political context. We draw our arguments on 20 qualitative interviews done between 2021 y 2022 using the qualitative content analysis programme N-Vivo. Our main argument is that there is a process of boundary work that compartmentalize both domains (religion and science), as subsumed to different logics, and related to different emotional registers. In a process of typification, science was described as a system of knowledge that is collectively constructed by legitimate and universal methods. Religion was then framed as way to avoid "uncertainty" and fear, in other words, a type of knowledge susceptible to personal feelings and emotional experiences. In this way, scientists interviewed showed how they draw boundaries between "truth" and "belief" as ways to define distinctive markers, and easily conjugate, both types of knowledge. However, these boundaries are shaken when debates turn to political controversies such as abortion, euthanasia, or homosexuality. In these historically controversial and unsolved debates, religious and scientific knowledges are mobilized to discuss political positions, and boundaries become blurred and contested.

**Delgado-Molina, Cecilia; – See Rafael Cazarin**

**Falade, Bankole;** Centre for Research on Evaluation, Science and Technology, Stellenbosch University, South Africa

*Trust in science and belief before and during the Covid-19 pandemic in Africa*

The Wellcome Global Monitor provides a unique opportunity to examine changes in public trust in science, scientists and the relationship between science and belief, before and during the covid-19 pandemic, a significant fear inducing event worldwide. The 2018 survey examines trust in science and scientists in the context of other social actors and these questions are repeated in the 2020 survey, allowing for the comparison of both rounds. The question "When science disagrees with the teaching of your religion, which do you believe", common to both surveys, also provides an opportunity to compare public perceptions of the relationship between science and belief, in the context of the severe restrictions imposed by science on belief, a competing way of knowing. The answer options: science, religion and it depends, will provide invaluable insight into shifting

positions following the devastating pandemic, for science or belief or coexistence of both forms in Africa. The African data will be compared with Europe and North America.

**Fallon, Richard;** University of Birmingham

*Geology and Genesis on a Mission: Samuel Kinns, William Carruthers, and 'Day-Age Theory' in 1880s Britain*

In January 1884, a vast array of evangelical notables appointed British schoolmaster Samuel Kinns on a mission to combat scepticism. This domestic mission (or lecture series) was inspired by the success of Kinns's *Moses and Geology* (1882), a lavish book promoting the dated theory that the six days of creation described in the Book of Genesis had constituted long geological ages. Immediately, leading savants wrote to *The Times* to criticise Kinns's qualifications, his claim to have been endorsed by the London Natural History Museum, and his character. Many, especially the Christians among them, were concerned by the Church of England's apparent endorsement of Kinns's anti-evolutionary 'day-age' theory. These letters precipitated an ugly feud between Kinns and the Presbyterian William Carruthers, a Natural History Museum botanist and himself an opponent of Darwinism.

Although historians of 'Genesis and Geology' have already discussed diverse clashes, substantial archival resources make this underexamined controversy unique and valuable. My paper combines perspectives from both literary studies and the history of science. It argues that, although day-age theory is known to have enjoyed eminent support in North America during this period, there existed wide support in Britain too – a fact less evident in the better-known debate between T. H. Huxley and W. E. Gladstone. As such, the combination of Kinns's purported charlatanism, literary canniness, and network of patronage presented a serious threat to secular naturalists and embarrassed Christians alike. Their responses were equally serious. Moreover, Carruthers's difficulty in discrediting Kinns's day-age theory in public and private demonstrates the problems elite Christian naturalists who opposed evolution faced when articulating respectable interpretations of Genesis.

**Fitz Herbert, Arturo;** Universidad Austral

*Science and Religion's moral and epistemological conflict perceptions in Argentina*

The literature studying perceptions of the relationship between science and religion has been biased towards views that conceive of the two fields as systems of thought or belief that may conflict over epistemological differences in, for example, how they conceive of the origins of the universe or of life (Jones, Kaden and Catto, 2019). However, Evans (2018) has proposed that differences in moral conceptions explain much better the persistence of conflicts such as those between evolutionists and creationists in the United States. In this case study of perceptions of science and religion in Argentina, we will propose that epistemological and moral arguments are intertwined in perceptions of conflict. However, we will show that, as Haidt and Joseph (2007) argue, moral judgements are intuitive and more emotionally charged, thus providing a greater basis for potential social conflict in a nation where the relationship between science and religion is not part of the public agenda.

**Garros, Tiago** TeachBeyond Brazil

### *Correspondences between engagement in science-and-religion education and self-reported intellectual character*

This paper will present the results of the research conducted by our team during the seed grant scheme of IRNSBS. Our project lies within the field of empirical virtue epistemology as to provide a survey-based foundation to evaluate what types of actions and behaviors regarding science and religion education can be linked to certain virtues/vices. We performed an empirical study by means of an online questionnaire with people who are somehow orbiting the Brazilian Association of Christians in Science (ABC2), an evangelical organization which provides resources, study groups and publications on science and religion from a non-conflicting/integrative point of view. The questionnaire uses as its basis the Intellectual Virtue Scale (Alfano et al, 2017) – a comprehensive psychometrically validated scale available to measure intellectual virtues/vices (open-mindedness, conscientiousness, intellectual humility, love of knowledge, and intellectual courage). We analyzed the self-reported perceptions of respondents on these traits and tried to find consistent and comprehensive correspondences between sets of people who exhibit those traits and their engagement with science and religion education initiatives provided by ABC2, which was also measured in the questionnaire. More specifically, for a given set of people who self-reported as showing a given intellectual virtue/vice, we wanted to know which would be the most parsimonious way(s) to describe that same set of people in terms of other intellectual characteristics and their behaviors in the engagement with science and religion education initiatives provided by ABC2. In other words: what do people who report being “lovers of knowledge” do regarding science-religion education initiatives? With the results, we expect to contribute to the theoretical development of empirical virtue epistemology by linking science-and-religion education and intellectual virtues/vices as to offer a guide to organizations around the world who join in the efforts of reaching out to religious communities with scientific knowledge.

**Ghoshal, Sayori;** Krea University

### *Race, Religion and the Construction of Scientific Expertise in India, 1920-50*

In 1872, British officials in colonial India were ‘surprised’ to find a large number of Muslims in Bengal. This prompted speculation on where these Muslims had come from, and who they “really” were. Taking up this question, from the 1920s, Indian anthropologists conducted various studies on Muslims, measuring their physical features and blood composition. The recurring question across such studies were – is the Indian Muslim a recent convert with Hindu blood or is he a descendent of foreign origin, such as of Arabs and Turks?

These studies established anthropological origin as the objective and absolute determinant of contemporary political status. What constituted the notion of this origin, and what did tracing such origin entail? Drawing on scholarship from history of science, postcolonial theory and religious studies, I examine how race and religion were constituted simultaneously, but as two distinct domains of knowledge and identity. The question of origin was as useful in developing the nationalist sciences of anthropology and serology, as for evaluating claims and self-identities of India Muslims and Christians. Since these studies involved scientific measurements of anthropometric features and statistical calculations, the truth of the racial, religious identity came to be the domain of trained experts.

Race and religion were configured as historiographical categories that were interlinked but also distinct in the kind of answers they offered to the question of identity and history of the nation. At

the same time, this implied that self-identity of people as Hindus or Muslims were construed as only a part of one's identity. The truth of the entire identity – whether Muslims and 'low-castes' had the same racial origin or whether Muslims originated outside the subcontinent – would be henceforth accessible only to trained experts. I argue that race and religion, thus, contributed to the production of scientific expertise in modern, nationalist India.

**Halafoff, Anna; and Marriott, Emily;** Deakin University

*Selling (Con)spirituality, Covid-19 and Countering D/Misinformation in Australia*

Conspirituality – the merger of conspiracy theories and spirituality – has attracted significant media and scholarly attention globally during the COVID-19 pandemic. This paper expands upon the 'two core' conspiratorial convictions proposed by Ward and Voas (2011: 104) that '1) a secret group covertly controls, or is trying to control, the political and social order, and 2) humanity is undergoing a 'paradigm shift' in consciousness.' We present an additional ten key convictions central to (con)spirituality, including those that are critical of modern science and result in vaccine hesitancy and/or refusal. Our analysis of these twelve (con)spiratorial convictions focuses on a sample of 'Aussie Warriors' selling (con)spirituality, and also of a prominent Australian wellness influencer attempting to counter the spread of misinformation within holistic circles. It reveals a more detailed and nuanced understanding of (con)spirituality and vaccine hesitancy than current commentary centred on the spread of 'militant wellness', and a greater knowledge of the benefits of and risks posed by spiritual convictions and practices during and beyond the COVID-19 pandemic.

**Hettige, Siri;** University of Colombo, Sri Lanka

*The Impact of Religion, Science and Rationalism on Identity, Identity Politics and Education Policy in Post-independence Sri Lanka*

Sri Lanka today is widely described as a multi-ethnic, multi-religious society. Social and cultural diversity referred to here is not new as it has evolved over many centuries of pre-colonial and post-colonial developments in the island shaped by a range of endogenous and exogenous factors. These included the influx of diverse groups of settlers from and outside the region during pre-colonial times and the subjugation of the country by three western powers for over four centuries. With external influences came not only diverse religions but also secular ideas embedded in philosophy and modern sciences.

The investigation, analysis and documentation of the above developments by academics and other writers have resulted in a vast social science literature on the subject. What is evident from this literature is that Sri Lanka's ethno-religious divisions have become more marked over time, giving rise to diverse identities and identity politics in a context of increasing democratization of politics. On the other hand, the spread of modern education created new public spaces where religious beliefs and ideas flourished side by side with modern ideas of science and secularism. These developments in turn continued to create tensions between identity groups linked to diverse religious denominations and modern, secular ideas. In the context of ensuing identity politics in post-independence Sri Lanka, schools and universities became sites of ideological debate and contestation linked to both religion and science. Education also became an important domain for public policy interventions under the influence of both religion and science. While many schools were segregated on ethno-religious lines, teaching of respective religions became part of school

curriculum. Meanwhile, teaching of modern sciences also became an integral part of school education. In other words, school children have been exposed to both religious and scientific ideas during their formative years of life.

**Jaros, Katarzyna;** International University of Logistics Poland

*Has Noah's ark been found? Not so fast. Who's to blame for the tabloidisation of archaeology, or how to sell science cheap in the press*

The story of Noah's ark and the great flood tells of a divine punishment for human wickedness, and one good man's efforts to save the planet's animals. It is one of the most iconic stories in the Bible and the Quran and has captured the public's attention over the centuries. Missions and expeditions to find remnants of Noah's ark have been made at least since the time of Eusebius of Caesarea (c. 275–339 CE), also literal creationists have built an ark according to the biblical measurements to prove it is possible. However, no scientific evidence has yet been found that Noah's ark existed, and no physical proof of the ark has ever been discovered.

Artefacts like the ark are one reason why religion was closely intertwined with archaeology in the early days of the science. However, the involvement of religious organisations in archaeology has not necessarily been positive. It has been a very common motivation for counterfeiting artifacts or arriving at false interpretations of archaeological data in order to present a particular version of history. In 1955, at a conference run under the auspices of UNESCO, whose aim was to discuss ways of popularising the natural and technical sciences, a list of the topics seen as conflicting with the scientific assumptions was drawn up. These topics included archaeological problems, namely conducting research and making discoveries based purely on religious beliefs. However, archaeological non-rational hypotheses seem to be very attractive to the general public. The aim of this presentation is an analysis of the areas where archaeology and religion intersect, as seen through the lens of popular science magazines. The selected case study is the search for proof of the biblical flood and tracing the quest to find Noah's ark. The material for analysis comprises press articles from popular science journals and the 'science' section in a range of daily newspapers: National Geographic, Gazeta Wyborcza (Poland), The Guardian (UK), Scientific American, Le Monde (France) and El País (Spain), published between 1970 and 2021.

In the material analysed, there is a distinct dichotomy, with differences in the media representation that relate to the religious value of Noah's ark. Two parallel trends can be observed: on the one hand, a number of popular science articles suggest that artefacts discovered were indeed fragments of the biblical Noah's ark, supporting the idea that the ark described in the Book of Genesis existed and interpreting the story in a literal rather than metaphoric way. The opposite trend is also visible, where the authors stress that it has not been scientifically proven that Noah's ark existed, and suggesting that it can only be considered a myth.

**Irrazabal, Gabriela;** National Scientific and Technical Research Council (CEIL - CONICET, Argentina). /National University Arturo Jauretche (UNAJ)

*Science, Health and Beliefs in the context of the Covid-19 pandemic in Argentina: a quantitative approach.*

This paper presents the results of the Survey on Science, Health, Beliefs and Society in Argentina conducted between August and December 2021. The central dimensions of the analysis were health, well-being and forms of care, beliefs and attitudes about the coronavirus, and about vaccines. The variables taken into account were age, gender and religious affiliation.

From 4,527 cases nationwide, the health problems reported by individuals and the health resources mobilized to solve them were identified. Ideas about the origin of the pandemic and the assessment of public policies and strategies to manage it were also analyzed. Finally, beliefs about the functioning, confidence and information available about vaccines were also examined.

In the context of the progress of the Argentine coronavirus vaccination program, these data allow us to inquire about the public perception of science and religion and their intersections in health decision-making and in the approach to critical events such as the pandemic.

This survey is part of the project Science and Catholicism: Perspectives and circuits of dialogue between contemporary Europe and Argentina in six scientific areas, funded by the International Scientific Network for the Study of Science and Belief in Society - Templeton Foundation.

**Jerratsch, Anna;** Max Planck Institute for the History of Science

*Religious Contexts of Discourses on Nature: The Case of early-modern Comets*

The schism of the Christian church in Post-Reformation Europe impacted not only theological beliefs but also more general conceptions of nature in Early Modernity. This paper uses the case of comets as inter-disciplinary boundary objects with a strong cultural connotation and scientific relevance to illustrate how religious convictions informed theoretical ideas about nature. I want to show that religious beliefs were an important element in the dynamics of Early modern science. German vernacular pamphlets and broadsides on comets of the 16th and 17th centuries offer a unique insight into a multifaceted discourse on knowledge and meaning of heavenly phenomena. It was the specific historical situation of an era when religious and political instabilities and the crumbling of social and intellectual orders made people insecure, and the need to explain nature and cope with daily life was expressed with reference to the celestial sphere and its curious phenomena. Interpreting comets as divine signs is an element of Christian theology and a perspective on nature that took different forms according to religious confession in the aftermath of the Reformation. I claim that both the theoretical conceptualization and the symbolic interpretation of comets were interconnected and strongly influenced by religious motives or theological considerations. Thus, this paper investigates how different conceptions of comets as transitional objects between explanation, causation, and meaning were expressed through texts and images within a media discourse marked by ideological and confessional struggles for hegemony. Specifically, I want to focus on visual material found in the pamphlets and broadsides in order to examine the relationship of imagery and the generation of knowledge and meaning.

**Jones, Stephen H.;** – See Burney, Saleema; University of Birmingham

**Kadan Abu Toameh , Nigmeh; and Pear, Rachel S. A.;** University of Haifa

*Possibilities and Advantages of Dialogue between Science and Religious Education in Israel?*

In this paper we will begin by presenting preliminary results from Delphi studies and in depth interviews with Muslim and Jewish Israeli experts in Science Education and Religious Education on their views regarding engaging the subject of evolution in RE class and religion in science class. These perhaps surprising results indicate that almost all experts agree that engagement in cross-disciplinary discussion would be advisable. The experts' views are plotted onto four quadrants of a matrix to illustrate their motivation for their positions. We will next present the preliminary results of the MATE questionnaire that is being administered to hundreds of 9th and 12th grade students throughout Israel, in Hebrew and Arabic, as well as to a sub-section of their teachers. Lastly, we will focus in on pedagogical interventions that are being tested to address the issues that have been raised in the first segments of the research. These interventions have been developed on an online platform to allow researchers to follow and understand the interests and questions of students so that future iterations can be more attuned. The presentation will conclude with outstanding questions that have been raised by the current research that we would like to continue to work to address in future projects.

**LaBouff, Jordan; and Ladd, Kevin;** Indiana University South Bend

*Registered Reports and the Open Science of Religion*

This workshop will introduce the Registered Report approach to empirical research and describe funding available to conduct registered reports in the psychology of religion.

This workshop will begin by introducing and reviewing examples of the Registered Report format for empirical research. In this format, research teams first submit a Stage 1 manuscript (including the introduction, proposed methods, and analysis plans) for peer review so that reviewers' suggestions can be implemented before data are collected. Once these plans are accepted, the manuscript receives an "in principle acceptance" - indicating that the article will be published pending successful completion of the exact methods described.

This format has several benefits for individual researchers and for the field, including strengthening Open Science Practices, addressing replicability concerns, and providing researchers a virtually guaranteed path to publication for a well-designed study.

After this introduction, we will introduce the Open Science of Religion Project. This Templeton Foundation-funded project will fund 18 Registered Reports in psychology of religion journals at \$20,000 USD each and is actively seeking applications. We will discuss how researchers from different fields and backgrounds (i.e., beyond psychology) might use this format and funding opportunity for projects focused on science and belief in society and then close with questions and discussion around the Registered Report format.

**Kevin Ladd – See Jordan LaBouff**

**Leicht, Carola;** University of Kent

*“Science v Religion” – exploring the role and use of the conflict narrative amongst US and UK Atheists*

Recent research on public perceptions of the relationship between science and religion has uncovered that there are a number of psychological variables and constructs that provide a more in

depth understanding as to when different forms of belief or non-belief support the notion that there is a necessary conflict between science and religion (Elsdon – Baker & Leicht, 2017). This paper builds upon this research and will present initial findings of two cross sectional surveys of 500 self-identified UK Atheists and 500 self-identified US Atheists.

The surveys tests how perceptions and strength in support for the conflict narrative is related to a number of psychological constructs, such as atheist's strength of identification with their non-religious identity or science. Additionally I measured a number of individual differences and epistemic motivations. I will use this data to gain an understanding as to what extent the conflict narrative between science and religions is merely a strong identity marker for UK and/or US Atheists or whether it could serve as an overarching belief system. I will also be able to use this data to see whether I can differentiate between sub-sets of Atheists within as well as between those two countries. Gaining an understanding of the similarities and differences between individuals identifying as Atheists in the UK and the US will give the field a deeper understanding on whether the conflict narrative between science and religion plays a similar role for all Atheists or whether it is necessary to differentiate between atheists subgroups as well as the wider cultural context within which they form and live their non-belief. I will outline how my findings contribute to a wider research project exploring how the conflict narrative between science and religion may constitute a meaning system for individuals who identify with atheism.

**Loh, Timothy;** Massachusetts Institute of Technology

*Temporalities of care during Ramadan in a Jordan audiology department*

Drawing upon five months of ethnographic fieldwork at an audiology department in Amman, I ethnographically examine the provision of hearing technologies—primarily hearing aids and cochlear implants—to deaf Jordanians as forms and practices of care (Livingston 2012, Stevenson 2014, McKay 2018), paying special attention to how my audiologist interlocutors carried out their work in the Islamic month of Ramadan. Healthcare practices are not conducted out in a vacuum but are shaped by cultural and religious contexts, as medical anthropologists have shown (Inhorn 2012; Roberts 2012; Zanini 2019). Despite its ostensible secularity, the hospital was a rich space to pay attention to how hearing technologies for deaf Jordanians are bound up with notions about religious ethics; a parent once explained to me that his daughter's deafness was her fate (*nasibha*), for example. Nowhere was this made more clear to me than when I was conducting fieldwork at the audiology during the month of Ramadan, when the hospital, like the rest of the country, slows down. With the daily fast from sunrise to sunset, practising Muslims wake up around 4 am for *suhoor* (the meal before the fast begins), go back to sleep and come to work around noon, finishing work around 4 pm, after which they go home in preparation for the *iftar* meal (the meal to break the fast) around 7 pm. This differed markedly from the department's usual working hours from 9 am to 2 pm during the months before and after Ramadan, and the shift in temporalities during this month also shifted how the audiologists I worked with carried out their work. Following Whitmarsh and Roberts' call for a "nonsecular medical anthropology" (2016), I use this case to argue that medical anthropologists must pay attention to the role that religion (or its absence) plays in shaping temporalities of care (cf. Sargent 2021).

**Mackey, Cameron;** Ohio University

*Increasing Christians' participation in science and reducing negative stereotypes through communal attributes*

Science has been associated with agentic traits associated with advancing the self (e.g., assertiveness). In contrast, Christians emphasize warmth over competence, suggesting a predilection with communal traits associated with considering others (e.g., cooperation). This discrepancy between science's association with agency and Christians' emphasis on communality may explain Christians' underrepresentation in science, as well as nonreligious individuals' biased attitudes toward Christians. Across three studies, we examine 1) the extent to which Christians are perceived as communal by Christian and non-Christian participants, 2) whether presenting science as communal (vs. agentic) increases Christians' interest, trust, and sense of belonging in science, and 3) whether presenting the religious background of a scientist influences the extent to which Christians have interest in, trust, and feel they belong in science.

We first conducted a pilot study to determine the extent to which Christians are perceived as emphasizing communal vs. agentic traits. Preliminary results indicate Christians are perceived as more communal and nonreligious individuals. Our first (preregistered) study will manipulate the extent to which a hypothetical science lab is perceived to be agentic vs. communal, with the prediction that Christians in the communal condition will have more trust, interest, and sense of belonging in science. We also explored whether our manipulation influences nonreligious participants' perceptions of Christians' intelligence and scientific abilities. Our second (preregistered) study present participants with either a Christian scientist exemplar (Francis Collins) or an atheist scientist exemplar (Richard Dawkins) acting in either agentic or communal ways, with the prediction that Christians who read about Francis Collins will report greater trust, interest, and sense of belonging in science, especially when Collins is presented as communal in nature. For nonreligious participants, we will explore the extent to which reading about Francis Collins influences perceptions of Christians as intelligent and scientific.

**(del) Mar Grier, Maria;** Universitat Autònoma de Barcelona

*Spirituality, biomedical technologies and "healthy" lifestyles: a sociological approach*

This paper explores the emergence, transmission and circulation of discourses and practices of reluctance and rejection of two types of biomedical technologies: vaccines and chemotherapy by particularly focusing on the role of spiritual beliefs when such rejection occurs. The contemporary relevance of new religious subjectivities crystallizes in an especially visible way at the intersection of science, spirituality and biomedical technologies. This intersection condenses and articulates moral visions, ethical norms, political-ideological constellations, and particular conceptions of the body, and of the healed body. Methodologically, the paper is based on an analysis of the circulation, and configuration, of such discourses in social networks (twitter), and on the analysis of biographical narratives.

**Marriott, Emily; – See Halaf, Anna;** Deakin University

**Martinez Cuadros, Rosa;** Universitat Autònoma de Barcelona

*Islam, Science and Gender: Negotiating Boundaries in two case studies in Spain and Morocco*

In this paper I will present the theoretical framework and the preliminary results of an ongoing project, which aims to explore contemporary processes of negotiation of scientific and religious discourses among Muslim population. More specifically, the project explores the existing positions and dilemmas on religion and science among Muslim people living in Barcelona and Tangier. The analysis includes a first comparative dimension, focusing on two specific scientific cases: the COVID-19 vaccination and the infertility treatments. The first case is relevant due to the recent pandemic situation that has resulted in a world crisis. The second case is important because it implies the gender perspective in a more direct way. The comparison between both cases will allow to understand better the different ways of articulating the scientific and religious discourses. The paper includes a second comparative dimension, as the study is conducted in two cities of two different countries: Barcelona and Tangier. The selection of these two cities will allow to explore the cases in two completely different urban contexts. These two cities respond to two distinct geographic realities with a different religious and social context. The methodology of research is based on qualitative techniques and the main research techniques are semi-structured interviews and ethnographic observation. The semi-structured interviews are being conducted to Muslim health professionals of different specialities (doctors, nurses, nursing assistants, scientific researchers...) and to Muslim leaders. The ethnographic observations include observations at events in mosques, Muslim associations, or other similar spaces in which this topic is treated. This project will have a clear impact in the study of the intersection of religion, science, and Islam, as this area of research is still not wide developed.

**Masigol, Hossein;** Sharif University of Technology

*Different tools, the same result; confirmation of high evolution acceptance among educated Iranians using MATE (Measure of Acceptance of the Theory of Evolution)*

Considering that an overwhelming majority of the country identifies itself as religious (Muslim), one may have expected some hesitancy in the acceptance of biological evolution, including amongst the educated. We previously recruited 4000 Iranians to participate in the GAENE (Generalized Acceptance of Evolution Evaluation) and MUM (the Measure of Understanding of Macroevolution) questioners and showed remarkable acceptance and understanding of evolution. We, in this study, recruited 2150 educated Iranians and evaluated their level of acceptance using another well-structured tool known as MATE (Measure of Acceptance of the Theory of Evolution). The results from the GAENE and MATE followed the same trend as different aspects of evolution (including human evolution) were widely accepted. We also did an in-depth analysis of nearly 1000 publicly published papers and saw no strong religious opposition. Instead, social Darwinism was criticized the most. Our findings have important implications as they point to the complex picture of the relationship between science and Islam in Muslim communities.

**Mason-Wilkes, Will;** University of Birmingham

*Science Media, Non-religion and Atheism: Affective engagement and its implications*

Building on work presented at International Research Network for the Study of Science and Belief in Society 2021 conference, this paper outlines the findings of a INSBS Small Grant funded project, investigating atheists' and non-religious individuals' engagement with popular representations of science in media. Specifically, the project was designed to uncover how different popular

representations of science inform atheist and non-religious people's understandings of science, the perceived relationship between science and atheism and/or non-religion, and how science is factored into atheist or non-religious identities. How science is understood to operate – the model of science that is worked with – is shown to be key in informing how atheist and non-religious people implicate science in their identities. Some atheists and non-religious people operate with a model of science that closely aligns with a media representation of science I have previously identified as 'religious' (Mason-Wilkes 2020). The different role different media play in shaping understanding of science is also interrogated. Engagement with popular science literature was viewed by participants as providing a greater depth of understanding and insight compared to mass media, e.g. television, representations of science, with these representations engaged with primarily for affective purposes. The implications of this for future science communication efforts is discussed.

**McCalman, Caroline;** University of Exeter

*'The Blueberries Dilemma' – guilt, sin, and environmental inertia*

Much theory on behaviour change discusses the effectiveness of guilt and shame as emotional leverage inducing behaviour change – in this case, pro-environmental behaviour change. This paper presents data which indicates the opposite relation – whereby eco-guilt produced inertia, not eco-action. 'The Blueberries Dilemma,' a narrative excerpt from a research interview, is used to illustrate the problem. Participants experienced eco-guilt due to their inability to achieve the form of 'true environmentalism' they felt was necessary to effect real, positive change in the global environment. When seeking to exercise environmental agency, they discovered the extent to which their range of action as constrained by the socio-economic structures they were embedded. Instead of becoming emboldened to challenge the status quo, the overwhelming nature of their infrastructural lock-in produced inertia, not action. The paper considers whether the Calvinist 'flavour' of modern environmentalism may be aggravating this inertia and joins a growing call for structural changes that will support, instead of stymying, eco-action by individuals and groups.

This paper builds on previous work exploring the tensions between idealised and realised forms of environmentalism (McCalman, forthcoming). Modern environmentalism is viewed as an inherently religious phenomenon, implicitly drawing on Christian cosmologies (most often on Protestant and Calvinist traditions). The religious 'lens' opens up a range of literatures which throw new light on the motivations behind environmental action.

**Miranda, Lucas;** Universidade Federal de Juiz de Fora

*Science and Religion as Portrayed in Secondary School Textbooks in Brazil*

There are several theories about the relationship between science and religion (S/R). Ian Barbour synthesizes them into four categories: Conflict, Independence, Dialogue and Integration. Other scholars propose broader and more sophisticated theories about these possibilities of relationships (such as John Brooke's Complexity Thesis).

This research analyzed thirty Brazilian high school textbooks of history, biology, philosophy and sociology recommended by the Ministry of Education and highly adopted throughout the country. The objective was to understand how those books address these relations between S/R and to verify if the approaches are in accordance with the state-of-the-art research in the field.

The findings reveal that many concepts addressed in the books are still based on common sense ideas without historiographical support, like the hypothesis of conflict or independence between science and religion, which are being widely criticized in the last decades. Among the 210 excerpts selected and analyzed, reductionisms, inadequate generalizations, myths and hypostatizations were found. The results also suggest a correlation between the author's conception about S/R relations and the way they both are presented. It was evident, for example, that authors who believe and/or defend the conflict hypothesis tend to talk more about religions in their books and in a negative and almost disrespectful way, revealing a certain bias or at least ignorance of the authors regarding the modern historiography on the relationship between S/R.

This study concludes that the approaches examined are quite heterogeneous. Although there are many satisfactory and good approaches, no book has been entirely free of historical problems, lack of science-based information, and biased views about S/R. Considering the large audience for which these books are intended and their impact on the formation of young students, this research strongly suggests the need for further studies in the area.

**Moyo, Philani;** University of Fort Hare, South Africa

*Traditional ecological knowledge, ecosystem based adaptation and the quest for climate justice in South Africa*

The discourse and practice of climate adaptation and resilience in South Africa largely remains rooted in technicist thinking with little regard for traditional ecological knowledge, indigenous knowledge systems and ecosystem based adaptation. Using 'rights based' theoretical thinking, this paper argues that continued marginalization of these ways of knowing, life and livelihoods with proven efficiency and effectiveness in ecosystem based climate adaptation practices constitutes social and climate injustice. To enhance ecosystem based climate resilience, especially in poor communities in rural South Africa, there is therefore need to integrate traditional ecological knowledge, indigenous knowledge systems with conventional climate science. The paper concludes with insights on how the structural configuration and the intrinsic power relations in the climate action system in South Africa can be reimagined to create fairer and socially just opportunities for the rural poor and marginalized who have their own ways of knowing, beliefs and lives.

**Muriithi Ndereba, Kevin;** Pan Africa Christian University

*The Role of Faith and Science Dialogue in Non-Religious Identity Formation: A Kenyan Perspective*

The faith and science dialogue has received scholarly attention in the recent past. Within the African landscape at large, the underlying assumption has been that Africans are religious. However, there has been a rising cohort of Africans who are increasingly identifying as non-religious or atheist. This research presents a qualitative analysis of the socio-cultural factors that affect or influence these minority identities within a pluralistic African context, exploring their emergence and diversities within the African context, with a specific focus on Kenyans who hold a non-religious identity. Secondly, this research aims at exploring how atheistic and non-religious identities are constructed, particularly given the concomitant issues surrounding emerging adulthood. This builds up on the theories around youth and identity formation, while foregrounding science and belief as a central theme of study.

**Nairn, Anthony;** York University -- Department of Humanities; ISSR -- executive assistant

*A View from the Heavens: The Distributed Affect of Three Photographs of Earth and How the Transformation Perspective Exposes an Intersection Between "Science and Religion"*

24 December, 2018 marked the fiftieth anniversary of the Apollo 8 mission. Broadcast live on Christmas Eve 1968, the first-ever images from the moon were shown to American and international audiences while the astronauts recited chapter one from the Book of Genesis. A photograph called "Earthrise" was taken shortly after the broadcast, capturing the earth as a distant orb, with the moon's surface in the foreground. In my presentation, I argue that "Earthrise" begins a genealogy of images of earth, including 'Blue Marble' and 'Pale Blue Dot', that engender a 'cosmic perspective'; a radical revision of perspective that compels the viewer to rethink their position within the cosmic whole. I will explain this 'cosmic perspective' and show that it is an instance of Charles Taylor's "transformation perspective"; a psycho-cultural phenomenon of change to worldview, in this case, brought about by a radical shift in the technological material conditions. I argue that these images not only engender a shift in psycho-cultural perspective, but as technological artifacts, simultaneously instantiate a literal change in perspective, having been taken from inaccessible space and through the processes and technologies of science. As evinced through the recital of Genesis 1:1-31 on Christmas eve 1968, this 'cosmic perspective' provoked by these technological artifacts is associated with a 'distributed affect' distinguished by religious and emotional narrative and rhetoric. In my presentation, I will examine and lay bare the juxtaposition of these presumed secular artifacts and the religious narratives, rhetoric and imagery that remain tightly interwoven with them, and show how the 'cosmic perspective' inspired by these images constitutes an enmeshing of the religious affect of western Abrahamic tradition(s), within scientific discovery, its presentations, technologies and artifacts.

**Navarro, Jaume;** University of the Basque Country (UPV/EHU)

*Science and Atheism in early twentieth-century Spanish Anarchism*

In 1909, the Catalan anarchist and pedagogue Francesc Ferrer Guardia was executed after a court condemned him to the capital punishment for his supposed involvement in a long-week revolt that took place in Barcelona. Ever since, Ferrer Guardia became a symbol for freethinkers, anarchists, anti-clericals and pedagogy reformists in Spain. Although not a scientist, he has often been portrayed as a promoter of the natural sciences through education and an opponent to the religious, mainly Catholic, worldview of many of his contemporaries. Anarchism was, in fact, one of the most influential socialist movements in Spain at the turn of the century, and one that has been, of late, much romanticized by some historians and a number of political activists. Literary men like Federico Urales, Anselmo Lorenzo, Ricardo Mella or the young Pío Baroja were some of the most influential actors in the anarchist movement, often using science and scientific topoi in support of their political agenda, their anti-clericalism and their atheism (think, for instance, of Baroja's "The Tree of Science" or Mella's translation of Kropotkin's "Modern science and anarchism").

In this paper, and encouraged by the recent publication of Ecklund and Johnson's *Varieties of Atheism in Science*, I suggest a preliminary study of the ways in which atheism, as opposed to mere naturalism, agnosticism or practical anti-clericalism, was characterized by the leading Spanish anarchists at the beginning of the twentieth century. I shall pay particular attention to the framing of

atheism in relation to the modern sciences, and vice versa, taking into consideration that hardly any of them were practitioners of the sciences.

**Ngo, Dalena;** Yale University

*Religious Restrictions in Access to Comprehensive Care at the University of California*

Hospital systems across the country are becoming more fiscally impacted by the neoliberal policies of our failing government. At the same time, (public) universities are also being constrained by their finances. The University of California's annual budget is comprised of a combination of state funds, student tuition, governmental contracts, sales and services, and academic medical centers; the academic medical centers are 39% of the operating budget of the UC, over 16 billion of the 41-billion-dollar budget. So while universities pro forma are about education; a significant portion of their capital comes from the medical sector. This points to the import of healthcare as a large source of revenue. While mergers and acquisitions are one avenue for hospital systems to expand; strategic alliances, joint ventures, affiliations and other kinds of agreements are another. These agreements are increasingly commonplace between academic medical centers and hospitals. This paper explores one such affiliation—between the University of California (UC), a public institution of higher learning with six medical centers and Dignity Health, a religious network of hospitals that operates the biggest healthcare system in California. This proposed affiliation, brought to the public's attention in 2019, ignited an unfinished debate surrounding the decision of whether the UC should affiliate with a hospital system that, on one hand, is committed to helping the underserved and on the hand, is bounded under religious dictates that refuse to administer contraceptives, abortions, and gender-affirming care—in essence committing discriminatory acts against women and LGBTQ populations. By using the potential affiliation as a case study, I aim to convey a set of premeditations and articulations under the premise of care, of who gets to receive care—and what kind of care—beyond the bifurcation that has often been foregrounded in the discussions around these types of partnerships.

**Nyhof, Melanie;** Carthage College

*The development of biological and cultural understandings of death in Tana Toraja, Indonesia*

Research in developmental psychology indicates that children understand the main components of biological death by age 10, and are also acquiring cultural ideas related to death. Children growing up in Tana Toraja, Indonesia, learn about biological death in school and also participate in a death-centric culture that engages in discourse and practices that seemingly conflict with that biological understanding. For example, it is customary in Torajan culture to speak of the recently deceased as “sick” until the time of funeral. How do Torajan children and adults make sense of these different ideas of death? In this paper we will present results of a multimodal research project examining biological and cultural understandings of death in a sample of Torajan children and adults. This research includes qualitative interviews with Torajan educators and other adults about formal and informal education concerning death. The project also involves quantitative research with vignettes and structured questions to gauge the development of biological and cultural understandings of death among Torajan children. Results will be discussed in terms of whether the developmental pattern of biological understanding of death is similar to that found in other cultures, and how the

cultural understanding of death develops and coexists alongside the biological understanding of death.

**Obadia, Lionel;** University Lyon 2 France

*Robots and religions: a matter of rationality?*

On the basis of ethnographic experiences in Asian countries (China, India, Japan and Korea), where robots are more and more being used for religious purposes, and ethnographic intensive fieldwork in robotic labs in Europe, this paper questions the issue of rationality and the nature of “belief” that is projected on humanoid robots. On the one hand, science fiction and (specific) religions (like Asian ones) favour a religious-oriented approach to robots (shared by some scholars, like Trovato, a roboticist or Geraci special in religious studies) but on the other hand, robotics (as academic discipline) seems to be quite reluctant to inject neither any form of irrationality nor belief in these “machines”. The paper will discuss the tensions between the two poles of imagination relating to robots: discourses of technologists and of what we can call discourses of technologists and aims at unveiling the complexity of intellectual postures apparently opposing those, in the field of robotics, who believe in robots and those who believe that robots are all but objects for belief.

**Oliveira, Alandeom W. ;**State University of New York at Albany

*Evolution and Creationism in the Brazilian Public School Curricula*

International comparisons of evolution education suggest a “global spread” of the creationist movement and raise concerns about potential growth of anti-evolution attitudes within public educational systems worldwide. Closely aligned with this international trend, Brazil has recently witnessed increasing resistance to the teaching of evolution among its populace. To attain an improved understanding the place of evolutionary theory in the Brazilian school curriculum, we turned to data made public by the National Textbook Program. Federally funded, this government program purchases and distributes textbooks in all content areas to public schools (throughout the country). In this presentation, we examine how the topic of evolution is approached in five of the biology textbooks requested by secondary teachers through this program. Beyond the examination of textbooks, we also reviewed evolution in college entrance exams, educational policy, and teacher preparation programs in Brazil. Our textbook analysis revealed that creationism has indeed become a part of the operationalized biology curriculum in Brazil. Despite its absence from the Brazilian official biology learning standards, it was a prevalent topic introduced to varied extents alongside evolution in the curricular materials of nearly 1.5 million students in Brazilian public schools between the years of 2015 and 2107. There appears to exist a certain degree of misalignment and tension between the intended curriculum (what is formally and ideally envisioned by educators as outlined in educational documents) and the operationalized written curriculum (how the vision is operationalized as curricular materials to be put into action by teachers) Such an integration of creationism as an official topic of instruction in biology textbooks raises questions and concerns about the possibility of creationism being mistaken by teachers and students as part of the scientific cannon.

**Olmos Alvarez, Ana Lucia;** National Scientific and Technical Research Council (CONICET, Argentina)/National University of Avellaneda (UNDAV, Argentina)

*Science and Religion in everyday life: the case of Catholic Women users of Assisted Human Reproduction Techniques (ARTs) in Argentina*

This paper focuses on the articulations between Reproductive Medicine and Catholicism in contemporary Argentina, where Catholicism is the country's main religious confession (according to a national survey, 62.9 % of the Argentinian population identifies as Catholic). Based on the experiences of Catholic women users of ART, this article aims to recover these actors' perspectives on science in general and reproductive medicine in particular, taking into account the processes of dispute, negotiations, and articulation of meanings and practices with their religious cosmology.

In-depth interviews of ART's users and ethnographic data from Catholic institutional spaces and biomedical institutions were analyzed using qualitative and interpretive methodologies. The main dimensions of analysis addressed were the beliefs, experiences, and criticism referred to biomedicine and religion as therapeutic resources mobilized in users' reproductive trajectories. Reproductive technologies experiences arise as an appropriate event to explore how agents, practices, rituals, and religious objects are connected to health decisions and involve decisional, emotional, and interpretive aspects.

The data presented in this paper comes from the inputs of the project Science & Catholicism: Perspectives and Circuits of Dialogue between Contemporary Europe and Argentina in Six Scientific Areas financed by The International Scientific Network for the Study of Science and Belief in Society-Templeton Foundation.

**Omowumi Babatunde, Abosede;** University of Ilorin, Nigeria

*Making sense of Covid-19 through the Lens of the Yoruba Indigenous Ritual Practices*

African indigenous religion permeates everyday socio-cultural life, experience and practices of the people. Among the Yoruba of South Western Nigeria, the age-long ritual practices of rites, cleansing and atonement are central to the conception and mitigation of disaster, epidemic and pandemic. This study explores how the religious belief have been central to the understanding of Covid-19 pandemic and the people's response to the government curtailment measures. Based on ethnographic fieldwork in rural communities in Ilaje, Ondo State, this study argues that ritual practices shaped the people response to Covid-19 pandemic and government curtailment measures in ways that necessitates context-specific pandemic mitigation policies. In the rural communities in Ilaje, the people's age-long religious belief centered on the mystical sources of epidemics and pandemics. The religious practices of ritual cleansing through masquerades (Umale and Egúngún) and secret cult (Alaghoró) are believed to avert outbreak of epidemics. The outbreak of epidemic and pandemic like Covid-19 it is believed symbolizes the wrath of the deities, and requires atonement to procure cure. Some analysts have attributed the low compliance to Covid-19 curtailment measures in rural communities to the limited enlightenment about Covid-19, poor access to health-care materials like facemask, testing kits and vaccine, and the deplorable state of social amenities. These report overlook the centrality of religious belief system to the everyday practices of the people in these impecunious areas. Also, available estimates indicating high infection rate in urban where indigenous religion is less practiced and low infection rate in rural areas suggest that the rural people are relatively spared by the pandemic. This reinforces the

people's belief in their ritual practices as pandemic mitigation measures. This raises the need for a deeper understanding of the complex socio-economic, political and religious realities that shaped responses to global health emergency, and designing context-specific pandemic mitigation measures.

**Pear, Rachel S. A.; – See Kadan Abu Toameh, Nigmeh;** University of Haifa

**Peñaloza, Gonzalo;** Centro de Investigación y de Estudios Avanzados del IPN (CINVESTAV)

*Between scientific views and religious beliefs: How do Colombian biology teachers understand the nature?*

Since the 90s, several arguments have been presented in the science education literature about the nature of science and its relationship with other knowledge systems; in fact, several authors propose that science education should be understood as an interaction between different cultures in order to reach agreements on scientific knowledge meaning. In particular, environmental problems are socio-scientific issues that involve moral, political and aesthetic criteria. In fact, environmental education aims to train subjects capable of recognizing dilemmas and consequences of human actions in the environment, taking into account different views and perspectives. In other words, an environmentally conscious subject is one who has the ability to use scientific knowledge and relate them to other views to make decisions that have the least possible negative impacts on the environment. As consequence, education has the responsibility of creating scenarios to put into play different ways of knowledge and views to reflect on the relationship between human beings and nature. In this regard, it is of great importance to know how scientific perspectives and other worldviews, as religion, interact to shape the views about of nature. This paper deals with Colombian biology teachers' ideas about the relationship between scientific views, religious beliefs, and their conceptions about nature. We carried out a qualitative multiple case study using semi-structured interviews, classroom recordings and group discussion. The data gathered were interpreted using a hermeneutic-phenomenological method. This approach allowed the construction of an analysis from teachers' discourses and narratives in which we developed successive interpretations to understand them. We conclude that the way teachers understand the relationship between scientific ideas and religious perspectives can explain their approaches about nature and their teaching practices.

**Peneycad, Claire – See Tippins, Emily;** Carleton University

**Riley, James;** University of Birmingham

*From 'First-Order' to 'Second-Order' Survey Measures of Science and Religion*

This paper forwards a new theoretical argument for how we can quantitatively measure the relationship between science and religion. It moves beyond classic measures around attitudes to science, religion and evolution, and beyond simply categorising individual's beliefs (called here "first-order measures"), to investigating individual's beliefs about others' beliefs (called here "second-order measures"). This 'second-order thinking' has deep implications for how we understand

debates about science and religion within and between countries, and has the potential to account for why the conflict between science and religion appears to be more apparent in certain contexts.

**Rivera, Reynaldo;** Universidad Austral

*Exploring your research community: exploiting big data techniques to discover Science and Religion emerging authors*

Scientific networks influence the type of research conducted by scholars (Latour & Woolgar 1986; Oliver 2009) as well as the configuration of emerging fields like Science and Religion. Networks of collaborators are “the core of the research endeavor” (Reyes-Gonzalez et al., 2016).

Current administrative classification schemes like those used by scientific databases and governmental agencies are forcing academics to self-categorize themselves in some areas that do not represent the reality of their academic production, which may limit knowledge management and interdisciplinary dialogues.

Therefore, scholars doing research in emerging fields such as Science and Religion, need more dynamic systems to characterize the research conducted in their groups and labs. Moreover, current search results supported by classification methods associated with such schemes are fragmented and not comprehensive enough to meet the needs of researchers studying new fields, especially when researchers want to identify the most significant scholarly work within an area, look for experts, and potential collaboration.

Our study proposes a methodology based on big data techniques, automatic text analysis, and co-word / co-author graph analysis to better identify scholars doing research in a given area taking advantage of textual, temporal and geographic dimensions. We aim to foster networking and collaboration among scientists whose research topics are not fully considered by the current classification schemes. Our methodology is on a dataset focused on the emerging field of Science and Religion. Additionally, a categorization metric is presented analyzing and visualizing the centrality of key issues and scholars, which play a central role not only in the scientific production and orientation but also in bridging different fields through a socially relevant topic like the relationships between Science and Religion and their impact on society and culture. The results show a difference between the scientists' actual research topics and those reported by administrative rankings.

**Rodriguez-Caso, Juan Manuel;** UPAEP

*Secularism, science, and belief in Mexico: nineteenth-century narratives as the basis for contemporary scientific discourse*

Since the Reform War (1857-1860), secularism was established in Mexico as the dominant condition based on which the State sought to establish the various relationships between individuals in Mexican society. Over the years, the banner of secularism has been emphatically adopted in public education as a way of ensuring “neutrality” in teaching, especially in the natural sciences. In science’s case (which is extended to education and culture in general), there is a recurrent discourse in which secularism is assumed to be an indispensable element of its “correct” practice. Several scopes are given to secularism, which are interrelated, and which vary in emphasis depending on the author: as the underpinning of the (supposed) incompatibility between science and religion; as a

synonym for science and thus the driving force of progress in society; as an extension (or also a synonym) of atheism (especially the version advocated by the New Atheism), as the “only” way to practice science. This paper aims to evaluate the conception of science in the secular narrative in Mexico, starting from its nineteenth-century positivist conception as an element that has changed little over the years, and thus propose modifications that update how contemporary scientific practice is understood. These changes emphasise bringing both the notion of science and secularism closer to social studies, especially epistemic pluralism.

**Roginski, Alexandra;** Deakin University

*The Body as Evidence of Truth: Biomedicine and Enduring Narratives of Religious and Spiritual Healing*

Practitioners of alternative medicine and spirituality often highlight narratives of healing as evidence for the superiority of their modalities over western biomedicine. We argue that this form of establishing and defending truth has a long history, and base this analysis on the historical and anthropological study of two periods: the late nineteenth century, when alternative theories about relations of mind, body and spirit flourished against a backdrop of political and religious transformation; and late modernity, when increased self-reflexivity and mistrust of secular institutions such as biomedicine have prompted growth in alternative medical systems. Foregrounding the voices of practitioners and ‘clients’, we outline how recurring narratives of the healed body position the individual as a person in control of their physical and spiritual journey. In our present time, scrutinising the healed body as an archive of truth deepens understanding of why denialist beliefs about vaccination and COVID-19 can prove so intractable.

**Rogińska, Maria;** Institute of Philosophy and Sociology Pedagogical University of Krakow, Poland

*An “alternative” God as a response to the oppressive state? The divine imaginary of (post)Soviet natural scientists*

This paper focuses on the issue of (de)secularization of the scientific and religious imaginary within the contemporary scientific institutions in two post-Soviet countries: Ukraine and Lithuania. The starting point of the research (supported by the IRNSSB in 2021/22) is the fact that both science and religion are based on their own, historically developed, ontological narratives and are powerful sources of ontological images. Both use an imaginary in their institutional practices with the established metaphors being able to generate specific modes of knowledge production within the institution. This means that identifying oneself with an institution presumes one’s loyalty to the institutional imaginary and its “epistemic culture”. The imaginary emerging at the intersection of science and religion reflects also the cultural ways in which society assimilates scientific ideas and conveys the changes in human experience of life within the social and natural universe. This places the imaginary at the center of the debate about the role of the religious and scientific institutions in the (de)secularization processes. Paradoxically, however, the imaginary has rarely been addressed by empirical sociologists of science and religion. This paper adopts the imagery-sensitive, empirical approach to explore the privatized, non-Christian religiosity of the scientific community from two Eastern-European Post-Soviet countries, which have both experienced a rapid religious change, from the Soviet-forced secularization to the later religious revival. Based on 50 in-depth interviews with natural scientists from Orthodox Ukraine and Catholic Lithuania I reconstruct their “alternative” (in

relation to Christianity) images of the divine to discuss the cultural role of the imaginary in religious change at the intersection of religion with science. I discuss finally the crucial phenomenon of the polemic message contained in the privatized imaginary of the scientists which can be summarized as a protest against some features of the modern Christianity known to them, as well as the political role of the Churches in their countries.

**Russ, Steve;** University of Warwick

*Bernard Bolzano: the Mathematical Priest of Prague*

Between 1805 and 1820 Bernard Bolzano, as part of his job as Professor of Religionslehre at the Charles-Ferdinand University in Prague, gave around 500 'edifying discourses' to large numbers of students and the public. These had been inaugurated by the Hapsburg Emperor Franz I to be morally uplifting, inspire religious feeling and fend off dangers of unduly liberal or revolutionary views taking root among the young people. In almost the same time period Bolzano also published five booklets on fundamental topics in geometry and analysis which were remarkable for their originality and insights. After being dismissed from his post for expressing opinions displeasing to the Church and the Emperor he worked intensively on mathematics, logic and philosophy while being banned from teaching, preaching or publishing within the Austrian Empire for much of his later life. Throughout his life he was devoted to the 'moral mission', grounded in his Catholic faith, of promoting the well-being and happiness of a society afflicted with much distress arising from poverty, injustice and other gross inequalities. Yet the mathematics to which he devoted such energy and attention does not seem to be of the applied, practically useful kind, it was 'mathematics which was at the same time philosophy'. Modern commentators have remarked on the apparent tension between these two powerful drives in Bolzano's life and work - in a man renowned for his integrity and sincerity. We explore the issue of whether we should seek the resolution of such a tension in the moral and religious beliefs familiar to Bolzano and his peers, or rather, whether the tension we imagine exists might be due instead to our own inherited but inappropriate ways of thinking.

**Sakellariou, Alexandros;** Hellenic Open University

*Religion and non-religion in Greek society during the Covid-19 pandemic: The instrumentalisation of science and the process of secularisation*

The Orthodox Church of Greece used to be and to a great extent still is a powerful institution with significant impact upon Greek society and politics. During the last years, however, a number of opinion polls have shown that a process of secularisation takes place in Greek society mostly among younger generations. As a consequence, it came as no surprise that the coronavirus pandemic gave rise to heated debates both about the role and place of the Orthodox Church of Greece and the role of science in contemporary Greek society. The purpose of this paper is twofold. On the one hand to look into the public discourse of the Orthodox Church of Greece and a number of significant Church figures in order to document how they perceive the role of science. On the other hand it will also focus on the public discourse of an atheist association in order to investigate how they value science in relation to the place of religion and the Orthodox Church in Greek society during the pandemic. The main argument is that during the coronavirus pandemic science has been instrumentalised by both parties and has been placed in the middle of the conflict between religion and non-religion,

considered either as subordinate to religious belief or as a powerful tool of the secularisation endeavour of the Greek society. Further to that, scientists' response in this 'conflict' will be also examined, together with the impact on the broader society through the secondary analysis of surveys and opinion polls on people's views with regard to the role of the Church and their trust towards the Church and science during the pandemic.

**Sander, Amrei;** University of Leipzig

*Cross-country analysis of prejudice related to science and religion*

In our presentation, we present preliminary results from an investigation into perception of other faiths and worldviews by interview participants. Our research is based on two large qualitative multi-faith data sets from Germany and Canada that covered, among other aspects, religious identity and scientific interests of participants as well as perceptions of other faiths in relation to science and instances of perceived discrimination and prejudice.

In the German sample of 64 semi-structured interviews, conducted in 2020 and 2021, there are numerous negative references of other belief systems, most notably Christianity by non-Christians. Occasionally, we note self-critical references, and more than half the religious/spiritual participants of our sample report instances or fear of discrimination against them due to their faith.

Comparing and contrasting these instances with data from the Canadian sample of 61 interviews, conducted in 2015 and 2016, we show that while similarities in the general features of mutual perception among believers of different faiths and the nonreligious exist, there is significant nuance in terms of the historical, political and cultural context of the two countries that informs important differences.

**Satish Vedanayagam, Joseph;** University of Hyderabad, India

*Fr. Pedro Arrupe and the making of a sociotechnical imaginary for Jesuits*

In 1968, then Superior General of the Jesuits, Fr. Pedro Arrupe (1907-1991), established a separate international office for Jesuits working in the sciences, essentially launching scientific activity as a missionary endeavour for Jesuits trained in the sciences. In this paper, I draw from Arrupe's writings and speeches to explore his views on science and progress. Having been trained in medicine and having narrowly escaped the 1945 atomic bombing in Hiroshima (Japan), Arrupe became one of the first scientifically trained Jesuit Superiors to advocate that Jesuits should engage with science as a means of achieving social justice and not merely use science as a tool for proselytization (perhaps in contrast to how Jesuits had engaged in science in Enlightenment Europe). I argue that this Arrupean vision for Jesuit scientific activity is what Sheila Jasanoff calls a sociotechnical imaginary: "collective held and publicly performed vision of desirable futures... and social order attainable through and supportive of advances in science and technology". I will explain that Arrupe helped establish an institutionalized form of Jesuit science, which despite internal vagaries and conflicts, came to be adopted as a shared understanding of what it meant to practise science as a Jesuit Catholic priest. While this vision originated in the individual of Arrupe, it was stabilized by subsequent Superior Generals and regional superiors of the Jesuits. I illustrate this with the example of how a "Secretariat of Jesuits in Science" came to be established by the Jesuits in India in 1978 and how it continues to function today, albeit with varying levels of social impact. This paper contributes to the study of

science and belief in society through its interdisciplinary engagement with the history of missionary science and science, technology and society studies.

**Shapiro, Adam;**

*Science, Religion and International Space Diplomacy: A tale of two Telescopes*

Telescopes have been a crucial technology for interrogating the dynamics of science and religion since Galileo first pointed lenses at the heavens. But in recent years, tropes of science and religion have operated in new ways in the creation and deployment of the world's most advanced tools for seeing ever further into the recesses of the cosmos. This talk will look at two multinational astronomical collaborations: The proposed Thirty Meter Telescope (TMT) in Hawai'i and the James Webb Space Telescope (JWST) launched in 2021. Both telescopes show the language of science and religion is intertwined with colonial discourses, whether it's laying claim to indigenous land in order to site and launch these devices, or the ambitions of multinational diplomatic partnerships to carry forward colonial ambitions beyond our planet. Strikingly, this language is deploying in seemingly disparate ways to justify the creation of the TMT and the JWST: Discourses of religious hostility to science is used to downplay and dismiss concerns about indigenous claims of sacred land at the proposed TMT site and language of science as harmonious with theology highlighted the celebrations of the Christmas Day JWST launch. Despite the seeming contrast in views about science and religion's internal relationship, this talk asks whether debates surrounding both telescopes rely on a shared understanding of science and religion as a conceptual dialectic that reinforces state power and serves as a foundation for international/multinational space policy.

**Sierra de la Torre, Javier;** Universidad del País Vasco

*Engineers communicating science. Identities, controversies and the science-religion conflict in fin-de-siècle Spain*

In this paper we will address the role of Spanish engineers as public communicators of a new idea of science, and their place in the controversies between science and religion. Given that Spanish civil engineers were incredibly active science popularizers at the verge of the 20th Century, our hypothesis was that they had participated in the public debate about the relationship between science and religion. However, the so-called conflict thesis, promoted in Spain mainly by humanists and politicians, is hardly to be found in the main scientific journals edited by engineers. We have studied the most influential such journals in fin-de-siècle Spain: Madrid Científico and Iberica. The first was mainly dedicated to the popularization of the applied sciences. It also addressed a number of disputes relevant to the socio-political situation in Spain: their campaigns were mostly focused on discussions about educational reforms, red tape complaints, and the defense of professional engineers. The science and religion relationship, which was prominent in clerical and anti-clerical milieus, was not among their topics.

Yet they did vigorously work hand in hand with Ibérica, a science popularization periodical run by Jesuit priests with a clear editorial positioning in the 'conflict'. As a matter of fact, besides Jesuit scientists, many articles were produced by engineers and military personnel, thus portraying science as an applied enterprise in the service of the construction of modern Spain. Indeed, they did have a few contributions on the relationship between science and religion. But except for a few examples,

especially on the origins of life and on the legitimacy of experimental “positive” knowledge for religious dogmas, they normally shied away from these topics.

**Silva, Hesley;** University Center of Formiga/MG – UNIFORMG

*The influence of intelligent design on teaching evolution: the perceptions of Biology teachers in three Latin American countries*

The Intelligent Design (ID) hypothesis, which advocates that there is a designer, creator, in the evolutionary process, refutes the random postulates of Darwinian theory. This view has been presented to unite science and religion on the subject of evolution, despite rejection from the academic community. The movement supporting ID has grown in Latin America, especially in Brazil, with the recent changes in the religious spectrum in the region. A survey was conducted with Biology teachers, those who teach the subject of evolution, in Argentina, Brazil and Uruguay. These are countries with distinct patterns of religiosity and secularization. We used a prompt from the BIOHEAD-CITIZEN questionnaire, namely: "Indicate your evaluation of the importance of a program inside the organism (intelligent design) in species evolution". Interviews were also conducted with the teachers and an analysis of their collective discourse was made. The data from the questionnaire revealed that almost half of the biology teachers in the three countries credit some importance to ID in accounting for the evolution of species. This data is worrisome because, if these teachers take this perception into evolution classes, the foundations of this theory may be compromised. The Brazilian teachers were more aligned with this hypothesis, followed by the Argentinian and the Uruguayan teachers were more refractory. The interviews confirmed this trend and demonstrated even more strongly this Brazilian teachers' conception of integrating science and religion in their elaboration of concepts about evolution. The secularism of the country seems to have little impact on the answers, but the level of religiosity suggests being relevant in the conception of ID. If we are to avoid the unnecessary and counterproductive conflicts that ID can cause in the teaching of biological evolution, it will be necessary to further investigate how these teachers' conceptions reverberate in their lessons on this subject.

**Silva, Ignacio;** Instituto de Filosofía, Universidad Austral

*Early Twentieth-Century Neo-Thomist Receptions of Science*

Thomism saw a revival after the great impulse of Pope Leo XIII mandate to study the work of Thomas Aquinas in every Catholic seminary around the globe. His aim in his late-nineteenth-century encyclical *Aeterni Patris* (1879), was to call all Catholic philosophers and theologians to restore Christian Philosophy in the spirit of the thought of Aquinas, as the subtitle of the encyclical read. Many authors, mostly in Europe, took up the challenge and many handbooks on “Aristotelian-Thomistic” philosophy or “Thomist” philosophy were published in the first half of the new century. These volumes were often thought of as “preambulae” to the study of theology in Catholic seminaries.

In this paper, I will offer a preliminary assessment of the ways in which three classical Catholic authors of this revival, namely Édouard Hugon, OP (1867-1929), Joseph Gredt, OSB (1863-1940), and Petrus Hoenen, SI (1880-1961), portrayed the natural sciences in their works. Following the papal mandate, these authors re-interpreted the place and role that the natural sciences had in the grand scheme of their neo-Thomistic systems, assuming a unique, at times rationalistic, approach to the

classical issue of faith and reason. I will consider, in particular, the views that these authors offered on cosmology and Darwinian evolution, and how they attempted to conciliate their understandings of Thomistic theology and the contemporary scientific theories with which they dealt.

**(de) Silva, Premakumara;** University of Colombo

*Buddhism and Science: Reconciling Science and Religion in British Colonial Sri Lanka*

In 1970 the anthropologist Gananath Obeyesekere introduced the concept of Protestant Buddhism to describe something that transpired in the wake of the politics of the “encounter” between Buddhists and Christian missionaries in Sri Lanka in the latter half of the nineteenth century. It was part of a series of debates between Christians and Buddhists that had begun in 1865. What was notable about this encounter—apart from the “protest” against the politics of Christian missionaries and the West that later marked it—was the gradual emergence of largely English-educated “urban” middle-class lay Buddhists. Some of these lay Buddhists initially worked with the American Henry Steel Olcott, who, with Helena Blavatsky, had founded the theosophical movement. Olcott had an impact on the “style” of Protestant Buddhist practice. Don David Hevavitarana, one of the renowned lay Sri Lankan figures they associate with Protestant Buddhism. Hevavitarana came to be widely known as Anagarika Dharmapala (“the Homeless Protector of the Buddha’s Teachings”), a designation he adopted defining the custody of a new religious role for himself. It was part of a new discourse about the concept of the ascetic life, a kind of “worldly asceticism” that Dharmapala wanted to practice, that would not be affiliated with any specific Buddhist monastic order in Sri Lanka. Thus it became possible for laymen to know more about Buddhism and its history than monks did. Through Olcott and Dharmapala the Sri Lankan appropriation of the Western conception of Buddhism was inevitable. However, their interpretation of Buddhism was based on the work of Western scholars let’s say ‘Scientists’. The western discovery of Buddhism as a ‘Rational religion’ which was inevitably not contradict or incompatible with ‘Western Science’ rather new modern Buddhism was subscribed or appropriated scientific view of the world with newly emerging English speaking urban middle-class lay Buddhists of the colonial Sri Lanka. This paper is exploring how such a social class was able to interpret rather reconcile science particularly evolutionary science and Buddhism in late 19th and early 20th century of Sri Lanka. In my view, such an understanding is prerequisite to explore nexus between Science and Religion in contemporary Sri Lanka.

**Sleigh, Charlotte;** University College London

*Natural theology 2.0? Recent trends in popular science*

Several recent publications and films have presented zoology, botany and mycology in a new and notably non-reductionistic – even spiritual – light. Amongst these titles we might count *My Octopus Teacher* (2020), *Braiding Sweetgrass* (2013) and *Fantastic Fungi* (2019). This paper examines how such texts treat nature, asking what features they share with historic western natural theology and in what ways they depart from it. It also seeks to position them at the intersection of popular science communication and academic science and technology studies (STS). The engagement of the latter with indigenous forms of knowledge and spirituality is of particular interest. The paper poses the big question of whether science can offer us spiritualised ways of engaging with (or within) nature in this age of ecological trauma.

**Smith, Maureen;** Newman University

*National and international comparative perspectives on the study of science, religion and belief in society*

Spirituality is a confounding factor in science education. Its synonymous and non-synonymous uses with religion are subjected to intense debate. At its heart are spirituality's perceived 'ambiguity' and the predictability of science. Although essential aspects of education; this dichotomy between science and religion remains shrouded in controversy. Spirituality, the advance of non-material characteristics of life, is held as 'fundamental British values', and, as such, is critical to school practitioners, because of its routine inclusion in the inspection criterion of schools' overall effectiveness by the Office for Standards in Education (OFSTED). If school students are to succeed within local, national and global communities; focus on personal insight; moral values, meaning and purpose, helps them to define who they are. It also helps them to express their part of the world, their inspirations and perspectives of life, which in proportion, may or may not be informed by a religious belief.

In response to the call to explore national and international comparative perspectives on the study of science, religion and belief in society, here, is a comparison of pre-service science teachers in the United Kingdom (UK) and Uganda. When comparing perspectives, this paper interrogates angles of pedagogic policy on practice regarding the spiritual dimension of school students. It contends that despite uncertainty, the promotion of spiritual development, spiritual, moral, social and cultural (SMSC), is a statutory requirement in all maintained (public) schools in England and Wales, mandated since 1944. Previous studies of national and international comparative perspectives, have not dealt with pre-service teachers' perceptions on spirituality in science education. Therefore, this paper calls for a review of policy as it targets both those on curriculum panels and policy makers. It also set out to contribute to pre-service and experienced science teachers' knowledge that may inform and improve practice particularly in multicultural classroom environments.

**Stephens, Neil;** University of Birmingham

*'The cells must come from kosher-slaughtered animals': Analysing religious narratives within the cultured meat community*

Cultured meat is a technology that seeks to grow muscle cells and tissue in bioreactors for consumption as meat. This emergent technology is claimed to have potential benefits in terms of reducing the environmental impact of meat production, as well as reducing animal slaughters, and offering potential benefits for human health. Cultured meat was first sold legally in late 2020 in an upmarket restaurant in Singapore, which remains the only country in the world which has a regulatory programme in place to allow its legal sale (at the time of writing). This paper draws upon a sociological study premised in Science and Technology Studies of the community of scientists and entrepreneurs seeking to produce cultured meat. The broader study has lasted over a decade, and explores how promissory narratives for cultured meat have been articulated and justified, how the ontological status of cultured meat has been contested, and how the community of cultured meat scientists have self-organised. In this paper, I will reflect upon the role of religious narratives within the broader discussion of what cultured meat is, and whether it is desirable, or not. Primarily, this has focused upon questions of whether cultured meat could be considered kosher or halal, and the implications of this for the mission of the cultured meat sector. This has involved multiple religious scholars presenting at cultured meat conferences and publishing academic papers detailing their

own analysis of the religious status of cultured meat, or as representatives of the analysis of other religious authorities. As such, this paper will analyse the role played by religious authorities in shaping debates about the promise, ontological status, and permissibility of cultured meat.

**Taragin-Zeller, Lea;** Hebrew University of Jerusalem

*"Kosher Science": Legitimizing National Geographic for Haredi Publics*

This paper will build on a new study (funded by INSBS) which examines how religious groups legitimize science by themselves, and for themselves. Whereas most scholarship on religion and science focuses on perceived theological 'tensions' between science and religion, in this paper we develop a nuanced and bottom-up understanding of the ways religion and science are negotiated and legitimized in everyday life. As a case study, we examine the pioneering publication of Niflaot (Hebrew: 'Wonders of the World'), the first 'kosher' Haredi magazine, launched in March 2021. Even though Haredi Jews have tended to have an ambivalent stance towards science, COVID-19 has introduced a renewed interest and growing acknowledgement of the importance of science education. To study this watershed moment in Haredi relationality to science, we combine content analysis and interviews with Niflaot's editorial staff, public relations team and magazine consumers, to capture the ways scientific knowledge is tailored for religious publics. As part of this presentation, preliminary findings will be presented to show the processes and prices of tailoring science for religious publics. These findings have the potential to contribute to critical public debates regarding inclusive science communication, which has become an urgent task amidst the disproportionate effect of COVID-19 on minority groups around the globe. While scholars have highlighted how science communication reifies forms of structural inequality, especially race and gender, we examine the challenges science communication pose for religious minorities. In addition, examining the Jewish-Haredi context in Israel also advances recent calls to go beyond Euro-American (and predominately Christian) contexts to study science and religion.

**Thokozani Kamwendo, Zara;** St John's College, Durham University

*Crossing disciplinary boundaries in the Study of Science and Belief in Society*

The emerging field of the Social Study of Science and Belief is gloriously multidisciplinary. Through my involvement with it I have found an intuitive understanding amongst its practitioners that my own home discipline Science and Technology Studies (STS) can provide useful resources to strengthen the field. This is an intuition that I share.

In this talk I aim to provide a preliminary overview of work in the Social Study of Science and Belief that draw on both methodological and theoretical work in STS. The questions that guide me are: What theories, methods and concepts from STS have already been applied to the field and how? What insights have they yielded that are useful for the Social Study of Science and Belief? My aim is to invite focused conversation about both opportunities and barriers to strengthening the cross-disciplinary dialogue between the sociology of science and the sociology of science and belief in society.

I am an interdisciplinary scholar of Science and Religion. My work is grounded in the Sociology of Scientific Knowledge (SSK) and explores the relationship between the construction of scientific and religious knowledge. I combine insights from STS, Religious Studies, and contemporary philosophy of

science to problematize understandings of the relationship between science and religion in a variety of contexts. I am currently a Research Associate at St John's College, Durham University where I explore the views of senior church leaders toward science and science-engaged theology.

**Tijani-Adenle, Ganiyat;** Lagos State University School of Communication

*Popular Culture and the Management of Mental Health Cases in Nigeria*

There has always been a spectacle around the media portrayal of mental health sickness in Nigerian popular culture. Mental illness is usually portrayed as a punishment for bad behaviour, a spiritual attack or a recompense from heaven. In movies, music and oral literature, people mostly get solutions to mental illnesses at spiritual centres (Churches, Mosques and/or spiritualists), by seeking forgiveness from those they have wronged or by making sacrifices to spirits and gods. Rarely do popular media portray psychiatric hospitals as centres for the treatment of mental health issues, and when they do, it is usually with stigma and an atmosphere of shame. This has further entrenched the societal beliefs that parents and relatives of individuals with mental illnesses should seek spiritual solutions. Surprisingly, this is not limited to poor, uneducated and non-literate citizens as media reports have consistently shown that most Nigerians (regardless of their religious leanings and educational levels) have patronised spiritual centres for mental illness treatments rather than hospitals. The media have consistently reported the gross human rights abuses that mental health patients suffer at these spiritual centres, with some as gruesome as rape and even death. Using content analysis of purposively selected media/cultural productions, this article will show how Nigerian popular culture frames mental health issues and their treatment. Also, stakeholders in the Nigerian mental health sector as well as spiritualists who "treat" mental illness will be interviewed to document their perspectives about the treatment of mental health issues in Nigeria. Guided by representation theory, this study will argue that the entrenchment of the spiritual-cause-and-solution paradigm to mental illness in Nigerian popular culture has empowered non-professional and religious groups/individuals to continue to abuse the rights of the mentally ill patients while taking financial advantage of their relatives and caregivers.

**Timol, Riyaz;** University of Cardiff – **Se Burney, Saleema;** University of Birmingham

**Tippins, Emily; Ysseldyk, Renate; Peneycad, Claire and Anisman, Hymie;** Carleton University

*Believing in science: (Dis)trust in science links religiosity, religion-science compatibility beliefs, and political orientation to vaccine hesitancy during the COVID-19 pandemic*

Throughout the COVID-19 pandemic, public trust in science has been put to the test. Moreover, there is evidence that some individuals are especially prone to scepticism about scientific findings that do not align with their ideological belief systems, including those based in political or religious social identities. Building on previous research (e.g., Beauchamp & Rios, 2020; Taha et al., 2014; Tippins et al., in prep; Ysseldyk et al., 2012), this study investigated whether trust in the scientific community (as well as government and media) and COVID-19 vaccination intentions would vary as a function of (non)religious group, religiosity, religion-science compatibility beliefs, and/or political orientation in a religiously-diverse, nation-wide Canadian community sample (N=280). Analyses examining (non)religious group differences revealed that individuals who self-identified as "Spiritual

but not religious” were less likely than Atheists, Agnostics, Christians, and those who self-identified as belonging to a range of religions that represent “Minorities” in Canada (i.e., Muslim, Jewish, Baha’i, Buddhist, Hindu, Sikh) to report that they would get vaccinated. Compared to Atheists and Agnostics, “Spirituals” and religious group members also reported lower levels of trust in the scientific community. Regression analyses revealed that only (conservative) political orientation and trust (in science, government, and media) were significantly associated with COVID-19 vaccine intent (negatively and positively, respectively). However, trust in science also indirectly mediated the relations between vaccine hesitancy and each of political orientation, religiosity, and religion-science compatibility beliefs. Given the ideological divides that the pandemic has exacerbated, this research has implications for informing urgent public health initiatives and knowledge mobilization strategies for relaying scientific findings to the public, as well as encouraging vaccine uptake in culturally appropriate ways in the midst of the current pandemic.

**Umukoro, Nathaniel;** Western Delta University, Nigeria

*Religious Beliefs and Medical Science Training in Nigeria: Evidence from Selected Faith-Based Universities*

This study examines how religious beliefs affect medical science training in Nigeria based on evidence from selected faith-based universities in country. This study is significant because previous studies have focused on other aspects of the link between religion and health care. For example studies have examined the place of faith and medicine in the healing process of Nigerians. This study relied on data from both primary and secondary sources. The key informant interview method was used to elicit responses that helped the researcher to ascertain how religious beliefs influenced the decision of some faith-based universities to engage or not to engage in medical training programmes. This was complemented with the experience of the researcher working within the Nigerian university system for over sixteen (16) years. Secondary data sourced from journal articles, reports and website of institutions such as the National Universities Commission were also used. With the aid of purposive sampling method, the researcher selected four well recognized faith-based universities owned by adherents of the Roman Catholic Church and Pentecostals for the study. The findings of the study indicates that that faith-based universities that strongly believes in faith healing or miraculous healing of the sick by God (Pentecostals) are not favourably disposed to medical science training while those that believes that in spite of God’s intervention hospitals are important (Adherents of Roman Catholic Church) engage in medical training. The study also discusses why in spite of the scientific background of key stakeholders in these faith-based universities, bias towards medical training still persist.

**Unsworth, Amy;** University College London (UCL)

*Science and Dis/Enchantment in Britain*

It has often been assumed that the growth of science disenchanted the world of meaningful immaterial forces such as gods, ghosts and spirits; and that this disenchantment played a significant role in the secularization of western Europe and beyond. In recent years this narrative has increasingly been challenged, but there remains a need for more empirical research on the relationship between science and enchantment, particularly on forms of enchantment beyond those promoted by institutional religion.

I will explore whether or not various forms of science engagement have a disenchanting effect on individual worldviews by analysing data from a commissioned survey with a nationally-representative sample of the British population. The design of the survey instrument was informed by detailed qualitative interviews carried out previously with non-religious individuals in Britain, which had revealed a very broad range of views with regards to enchantment. While some enchanted beliefs function at the level of offering non-materialistic explanation, for example regarding human origins, others are more instrumentalist, offering the possibility of interpretation of meaningful forces through various methods of divination, or manipulation through prayer, spells, the power of positive intention, or other means. The relationship of these different forms of enchantment to science will be examined in detail.

**Vanney, Claudia E.;** Universidad Austral (Argentina)

*Social intellectual virtues for interdisciplinary studies of science and belief in society*

The study of science and belief in society cannot be addressed by a single discipline but rather by a range of disciplines across the social sciences and humanities. In a previous paper, I noted that the challenge is remarkably significant in interdisciplinary research. This is because, in interdisciplinary research, experts with diverse backgrounds should work in a joint, but not independent, manner on a common problem, engaging in a creative pluralism that requires them not only to learn new content from different fields but also to share their cognitive methodologies.

In recent years, the growth of virtue epistemology has opened new perspectives on the character strengths of good thinkers and inquirers. Excellent personal qualities of good researchers include curiosity, intellectual autonomy, open-mindedness, intellectual humility, and intellectual courage, among others.

In the study of intellectual character, virtue epistemologists have tended to describe intellectual virtues as “self-regarding” or as furthering the individual inquirer's epistemic well-being. Although some virtue epistemologists have gone beyond this, describing intellectual virtues as having an “others-regarding” dimension, in my view, this expansion isn't sufficient to capture the social dimensions of intellectual virtues.

In this paper, I propose to correct that limitation illuminating the social dimensions of intellectual virtues and the characterological aspects of good interdisciplinary research.

Social intellectual virtues, such as intellectual empathy, intellectual trust, or intellectual friendship, can be defined as personal character traits that facilitate knowledge acquisition through other people. They are virtues necessary for making the social aspects of knowledge-seeking go well, regardless of whether that inquiry is aimed at the agent's own or another's share in epistemic goods. As the second-person relatedness in acquiring knowledge is the main characteristic of social intellectual virtues, they are in some sense in between “self-regarding” intellectual virtues as they're typically described and “others-regarding” intellectual virtues.

**Villaseca Robertson, Andrea;** San Marcos National University

*Teaching evolution in Perú: A small sphere*

In the 1993 political constitution of Peru, the preamble section says: “The democratic constituent congress, invoking almighty God, ....” and in the article number fifty mention “.... The state recognizes the Catholic church as an important element in the historical, cultural, and moral formation, and gives them their support. The state respects other kinds of confessions and can establish collaboration with them”

Catholicism is the most important religion in Peru, our main holidays are based on catholic dates: Jesus's Birth (25th December), Immaculate Conception (8th December), San Pedro & San Pablo Day (29th June). In Peru, there are other religions due to Evangelism, Adventist, Jehovah's witness. Some of them use fossils as testimonies of biblical events like the universal flood.

All these situations mentioned above difficult to teach evolution to people outside an academic context. A survey of local people in Lima (n=354) found that 34% of the population does not know our past during the last 70 000 years, 48% disagree that we have developed from other animal species, and 32% consider that humans lived at the same time as dinosaurs. We surveyed academic context to students of geology and biology (n=87) in two different universities and find that 99% of them want to listen and study more about evolution (seminaries and conferences) only 5% don't know about evolution, 100% consider that evolution is important to explain what human are in nowadays.

Both surveys were made by biologist undergraduate students at private universities in Lima. So, the main conclusion can say that knowledge about Charles Darwin and the evolution of species is a topic reserved for a very specific group of society (scientific persons related).

**Wallace, Rebekah;** University of Oxford

#### *Philosophical Feelings in the Dark: Female Philosophers and Embodied Cartesian Physics*

Although there has been increasing interest in the philosophies of 17th and 18th century female thinkers such as Émilie Du Châtelet, Anne Conway, Margaret Cavendish, and Mary Astell, little work to date has been done on their philosophical method. In this paper I lay out the philosophies of two 18th century female philosophers, Émilie Du Châtelet and Marty Astell, and argue that from the perspective of new discoveries in embodied cognition we can reinterpret their philosophical and theological work in a more embodied and relational light. This can be seen in their respective approaches to synthesizing openly Cartesian sympathies with their theology. Although they cross cultural and disciplinary bounds, these women were equally interested in stitching together multiple aspects of the reality in which they lived in order to find a viable synthesis for their faith and physics.

Émilie Du Châtelet once said in her *Foundation of Physics*, “The study of physics seems made for man, it turns upon the things that constantly surround us. . . I will try to place this science within your reach, and to disengage it from this admirable art, called algebra, which separating things from images, eludes the senses, and speaks only to the understanding. You are not yet able to understand this language, which seems rather that of the mind than of the whole man.” This is a curious statement given that often mind alone was associated with man, the wholeness of humanity often left out of the picture altogether. I argue that both Émilie Du Châtelet and Mary Astell approached their Cartesian loyalties in a unique and embodied way, and this paper aims to use recent discoveries in embodied cognition as a framework for understanding their methods of approach and what this might mean for discussions today on science and belief.

**Wickramasinghe, Veranga;** Gampaha Wickramarachchi University of Indigenous Medicine

*Narrative of King “Ravana” Mythology or redefining Sinhalese identity; A study based on public discourse related King Ravana*

This paper presents a critical study of the belief in King Ravana’s legend. It is specifically explored on how public discourse on Ravana has been reinterpreted as a originator of the Sinhala nation also as a great warrior and a scholar with extraordinary knowledge in science and technology. Although historical or archeological evidence does not exist related to Ravana there are many folklores; stories and myths circulating around the King Ravana in Sri Lanka. The ongoing discourse related to Ravana emphasizes that he was a great scientific scholar who held keys to wide areas of scientific and technological knowledge. This research was carried out by employing a qualitative research method in which primary data were acquired by key informant interviews and through extensive literature related to existing folklores and media reports. The study also conducted in depth interviews with important informants including Historians, academics, university lecturers, anthropologists, archeologists and Scientists who have expertise in the area of study. Several folklore related sites have been utilized for the collecting of qualitative data covering Central Province, Northwestern Province, Uva, Western, Southern, Northern, Eastern, Sabaragamuwa province. Researchers essentially dedicated their attention to the areas associated with Ramayanaya and were designated as major spots in folk stories of Ravana. The study identified that Ravana narrative has been taking new shapes in post war Sri Lanka. Even Though written literature suggests Ravana to be a ‘Hindu’ devotee the new narrative is using Ravana as the idol of the Sinhala Buddhist community or as it’s originator. Most importantly the narrative of Ravana is currently portrayed as a scholar with great knowledge on Science and Technology. The era of Ravana is also referred to as a highly civilized era which had technology now considered as lost. Even the Sri Lankan government has taken initiative to research on archeological evidence related to aviation technology of Ravana. In addition there is a new trend of adapting Ravana worshiping rituals into Buddhist temples in the country as a new practice and adapting “term” Ravana into Buddhist religious extremism activities.

**Wright, Ron;** Southern Nazarene University

*Varieties of compatibility: Religious orientations, identity, theistic intellectual humility, and the science and religion conflict/compatibility scale*

Cultural identities, belonging, and ethical motivations have been the focus of recent work examining the differences in perceptions of compatibility and conflict between religion and science. In addition, there may be differences in perceptions of conflict and compatibility according to different domains of explanatory overlap between religion and science, such as explanations around the origins of life versus explanations of interactions between humans and the world. Although Christian identity is often treated as a unitary identity, research in the psychology of religion suggests that psychological dynamics underlying belief and attitude are varied even within Christian populations and nuanced measurement is needed. For this present study (N = 221), drawn primarily from a sample of college students at two private Christian universities in the Southern region of the U.S., security-focused (SF) and growth-focused (GF) religious orientations were examined in relationship to perceptions of compatibility or conflict between science and religion and personal identification with science, religion, or both. Preliminary results indicate that stronger SF and GF religious orientations and personal religious identification were associated with increased perceptions of compatibility between science and religion for both explanations of human life and human-world interactions. A

moderation analysis revealed that personal religious identification negatively moderated perception of compatibility for explanations of human life for SF participants, while it positively moderated perception of compatibility for GF participants. Two aspects of theistic intellectual humility, intellectual submission to the divine and human finite limitations, were found to fully mediate the relationship between a SF orientation and explanations of human life and human-world interactions, while a third aspect, belief bias limitations, was not found to mediate these relationships. Implications of religious orientations for understanding identity within Christian populations as it pertains to the perception of conflict and compatibility in religion and science will be discussed.

**Yalcinkaya, Alper;** TED University, Ankara Turkey

*Important, thus private: Young Turkish women's views on the question of science and religion*

In this presentation I will share some preliminary findings from a study conducted within the framework of The Sociology of Science And Religion: Identity And Belief Formation re-granting initiative. Interviews conducted with female college students in Turkey focused on students' views concerning science and religion, and explored the ways in which they draw on scientific and religious ideas in framing and justifying their views on gender and sexuality, and describing their worldviews in general. The findings from the in-depth interviews have implications regarding the effects of the dominance of religion in politics on individual religiosity, and the specific struggles of women under these circumstances. While science and religion were commonly described as harmonious, at least in principle, interviews revealed the assumed political significance of such questions. A common outcome of these concerns was to approach the issues as private matters that should not be linked to larger public controversies.

**Ysseldyk, Renate – See Tippins, Emily;** Carleton University

**Zarzeczna, Natalia** University of Amsterdam

*Psychological distance to science: Decreasing distance reduces science scepticism*

Sceptical attitudes towards developing technologies, such as genetic engineering or nanotechnology, have been linked to stronger religious beliefs. In our research, we suggest to move beyond investigating religious beliefs as a source of science scepticism. First, religiosity is immutable, that is, it cannot be reduced to improve science attitudes. Second, it is likely that a basic psychological mechanism might better predict science attitudes than a belief system. Hence, we present evidence for a theory-informed and malleable antecedent of scepticism: psychological distance. We suggest that experiencing science as close, which involves perceptions of science as achieving its aims with certainty (hypothetical distance), being applicable in the present (temporal distance), being investigated in local locations (spatial distance), and concerning people similar to oneself (social distance), should lead to science acceptance. In contrast, perceiving science as psychologically distant should increase science scepticism (Trope & Liberman, 2014). To test this assumption, we presented participants with brief newspaper-like advertisements describing gene editing (Studies 1 & 2; N = 586) and nanotechnology (Study 4; N = 465). We manipulated the content of each advertisement, such that the information was either psychologically proximate or distant.

Participants presented with the psychologically close versus distant content were less sceptical about gene editing and nanotechnology. Overall, psychological distance is a casual factor in explaining science scepticism. Implications of these findings for the association between religiosity and science scepticism will be discussed.