



## **Abstract Booklet**

### **5th Annual Conference Programme**

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For programme updates, please visit our website: <https://scienceandbeliefinsociety.org/live-events/insbs-5th-annual-conference/>

#### **Weekday Worldviews and Psychic Nights in England: Initial Project Findings**

Adam Powell, Durham University

Funded by the INSBS, 'Weekday Worldviews: The Patrons, Promise, and Payoff of Psychic Nights in England' is the first mixed-methods large-scale sociological study of those who attend psychic nights in Britain. Clear evidence shows that psychic nights, events typically held on weekdays at local pubs or social clubs in which a psychic offers tarot card readings and/or opportunities to connect with deceased loved ones, are becoming increasingly popular in both western Europe and the United States. Employing a person-centred co-production approach, this study combined participant observation, an online survey, and semi-structured interviews to gather both first-hand accounts of the motivations and outcomes of attending such events as well as psychometric data regarding the paranormal beliefs, mental health, and scientific worldviews of those in attendance. Why are these events becoming more common? What are the epistemological commitments of those who attend? Is the phenomenon a simple case of the 'suspension of disbelief' in the name of entertainment or is there something more profound, more existential, driving contemporary Brits to attend? This paper will present preliminary findings from the project, introducing themes and avenues for further research that emerge from this landmark study.

#### **It still feels a bit weird, a cemetery is a place of grieving: School Teachers' Handling of Death-Focused Activities**

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

There is growing realization among scholars that an awareness and acceptance of our death can help us flourish by recognizing the importance of living meaningfully until the end. Yet, death remains taboo in education, instead giving rise to death fear, denial, and anxiety. Although it is in the curriculum, death is a topic that educators tend to avoid. When it comes up, death is approached as just another topic within the confines of a techno-scientific cannon rather than an opportunity to ponder about grand existential questions. To illuminate this issue, this study examined US schoolteachers' handling of death-focused activities involving different types of death (human and nonhuman) and various forms of exposure (direct observation, vicarious experiences). To elicit their handling of death-related activities, teachers were asked to react to short cases describing four scenarios: a cemetery fieldtrip, a visit to a museum featuring an Egyptian exhibit with mummies followed by a discussion about embalming, an ecological project involving data collection and analysis of animal roadkill, and a lobster cookout lesson wherein a lobster is cooked alive. Overall, the more direct the death experience, the more reservation and opposition teachers expressed. Teachers were particularly opposed to the lobster cookout on multiple grounds (emotional, moral, medical, and religious). On the other extreme, there was consensual support for a visit to a museum featuring an Egyptian exhibit with mummies as long as the follow-up discussion about embalming remained religiously neutral (focused on Egyptian culture, not religion) and avoided graphic details (e.g., pulling brains through noses with a hanger). Teachers were also generally supportive of the roadkill project, provided that students were given existing data to avoid staring at dead animals. Likewise, there were mixed reactions to cemetery fieldtrips, with secondary teachers more open to this activity than elementary teachers.

## **Finding Meaning in the Heavens Above: The Crown's "Moondust" on Science and Religion**

Anthony K Nairn, York University

Netflix's popular and now concluded historical fiction drama *The Crown* has been a success story for the streaming service's original content. Along with other notable hits (*Black Mirror*, *Stranger Things*, *Orange is the New Black*, etc.), *The Crown* has been widely discussed in both public and intellectual circles (Abellan et al. 2021, Rampazzo and Hueman 2023, Rangiwai 2023). This paper will focus on season three episode seven, titled "Moondust", the fictional representation of the show's Prince Philip's struggle to find meaning in the wake of his mother's death, the Cold War, and the struggles of England in the aftermath of World War Two, and his dissolving faith. The episode is centred around the events of the Apollo 11 moon landing, re-creating that sense of awe and wonder that emerged as families gathered around televisions to witness the grand achievement. It also portrays the origins of St George's House, an important contrast for the episode. Philip, struggling internally with his faith and his world, becomes enchanted by the moon landing and desperately wants to find meaning in that event. After fatefully meeting the astronauts Neil Armstrong, Buzz Aldrin, and Michael Collins, Philip is left unfilled. I will suggest that this episode is an excellent example of the importance of complexity in reflecting on science and religion in popular culture, as too often it is assumed the conflict thesis will be present. Utilizing (re/)disenchantment and secular studies work, my argument will be that this episode asks important questions related to sources of meaning for discussions on science and religion, exploring the boundary between the metaphysical and the physical, the natural and the supernatural, as sources of meanings, morals, and values. This reflects a wider theme which I have drawn attention to during my time with INSBS of popular programming on science "reoccupying" traditional sources of meaning, morals, and values. Further, I will suggest that media content like the "Moondust" episode of *The Crown* offers audiences a place to reflect on the role of science and religion in their own meaning-making practices.

## **Perceptions about religious institutions and conceptions about the natural world shape worldviews in Argentina**

Arturo Fitz Herbert, Universidad Austral

In the past, secularisation theories assumed that the development of science would produce "disenchanted" worldviews that would reduce religiosity. Although most sociologists of religion have abandoned this view (Berger, 2014), this assumption persists among some science communicators (Wuthnow, 2012). Recent theories have postulated that secularisation processes may not reduce religiosity, but that they modify the worldviews of both the religious and nonreligious (Taylor, 2007). Based on the analysis of 80 interviews and 6 focus groups with scientists and the general public in Argentina, I will propose that conceptions about the functioning of the natural world and positions regarding religious institutions are two central variables for understanding the influences of science and religion on worldviews. The combinations of these variables show that the worldviews that most conform to the stereotypes in Argentina are those that prevail among atheists and agnostics and among conservative evangelicals. Among the former, the view of a natural world that works by exclusively natural mechanisms and a rejection of religions as premodern institutions prevails. The latter participate in religious institutions and believe that God intervenes regularly in the alteration of natural rules. However, other groups depart from stereotypes: among the majority of Catholics, acceptance of religious institutions and the notion that the material world is governed by natural mechanisms that do not preclude the existence of a creator, but that also do not imply that God intervenes on a regular basis, prevails. Meanwhile, among the non-religious with supernatural beliefs, rejection of religious institutions coexists with various supernatural beliefs, such as the existence of elves, extraterrestrial life, the possibility of divination or the alteration of the world through magical rituals.

## **African scientists' perceptions of science and spirituality in the COVID 19 pandemic era**

Bankole Falade, London School of Economics and Political Science

The Covid-19 pandemic, perhaps, like the Darwinian theory of Evolution, represents a global milestone in the relationship between science and spirituality, between biology and belief, given the suffering and death toll it unleashed across the world.

The African experience of the pandemic was however different, as there was a huge gap between the high expectations and the much lower death tolls recorded across the continent. The lower death tolls soon spawned less fear of the disease and a misattribution of its etiology and control to divine intervention.

In continuation of our study of the pandemic in Africa, a continent that has been described as 'notoriously' religious, this presentation focuses on scientists, seeking to know, through the lens of social theory, if the pandemic, in any way, encouraged a review of previously held beliefs and positions on spirituality and science, given lived experiences of a pandemic, that killed thousands around the world.

We interviewed scientists from various disciplines, arts, social sciences, engineering and natural sciences in Ghana and Nigeria, between October and November 2023, exploring notions of conflict, coexistence, replacement and overlapping magisterial as perceptions of the relationship between the pandemic and religious beliefs. The methodological approach was narratives, exploring lived experiences of the pandemic and its impact on the direction of trust in science and belief, more faith less science, or vice versa.

Preliminary findings indicate a continuing coexistence of science and belief among academics but perceptions and lived experiences vary. We add to our understanding of the relationship between science and belief among academics and perceptions of this relationship during a pandemic, in the qualitative tradition. The occurrence of the range of perceptions may however require further empirical investigation. The project presented here was sponsored by a grant from the INSBS.

### **The Rule of Photographic Technology in the Encounter between Nso' Indigenous and Western Religion practices**

Banla Noela Kinyuy , University of Bamenda Cameroon

There have been controversies in Nso' about the influence of Christianity on tradition as well as tradition on the church in particular. These debates most often surface around indigenous beliefs and the Catholic Church. The coming of Europeans to Cameroon marked a turning point in traditional belief in Nso'. It is against this background that the study sets out to investigate through photographic technology, the relationship between indigenous and Western religious practices in Nso'. It evaluates the extent to which the Nso' people incorporated Western religion (Christianity) and its impact on tradition as well as the influence of Nso' indigenous practices to the church and the Catholic Church in particular. Specifically, the paper critically analyses the rule of photographic technology in the representation of indigenous religious and Western practices among the Nso' people of the Bamenda Grasslands of Cameroon. Relying on primary (oral and visual) and secondary sources, the paper demonstrates that indigenous religious practices has greatly affected the Catholic Church set up. It equally portray a similarity in religious practices in Nso' and the church. The findings of this research also demonstrate methodologically the role and importance of photographs as a medium for preserving memories.

### **A Letter from Science: Irreligion and Religion in 19th-Century Madras**

Barathy M.G., Ashoka University, India

The Madras Secular Society (MSS) was a freethought association that operated in the city of Madras in India from 1878 to 1888. The MSS was a branch of the National Secular Society established by Charles Bradlaugh in 1866 in London. While being a catalyst of progressive social reforms, the society introduced modern radical and liberal ideas to the reading public in the Madras Presidency through its bilingual periodicals. The MSS introduced cosmology, physics, chemistry, diseases and medicine, and Darwinian evolutionary arguments as part of their attempts to disenchant the world. The freethinkers entered into polemical wars with their religious opponents such as the Hindus, Christians, and Theosophists. This paper looks at the fin de siècle science debates in the Tamil country in India by exploring the polemical interactions between the MSS and contending Hindu religious organizations.

Spiritualist and religious reform associations in Madras had been utilizing modern scientific arguments and discoveries to argue for the existence of an omnipotent designer from the second half of the 19th century. In an already charged atmosphere due to incipient nationalism based on Hindu ethos, the

establishment of an 'infidel' organization created high level of anxiety among the religious elites. The Hindus and Christians had found a new threat besides each other. The Madras atheists censured the religious elites for misrepresenting science and scientific methods. The MSS was a forerunner to other rationalist and radical anti-caste organizations in the 20th-century Tamil country. The paper mainly looks at the periodicals and publications of the MSS, and articles pertaining to science and anti-atheism from the religious quarters such as the Saivites, Theosophical Society, and Brahma Samaj, who operated in Madras Presidency. By focussing on these interactions, this paper seeks to uncover the relationship between secularism, religion, and science in the 19th-century South India.

### **Secular biology graduate teaching assistant perceptions of the relationship between religion and evolution**

Baylee Edwards, Arizona State University

Approximately 30% of undergraduate biology students in the U.S. reject some elements of evolution, primarily due to perceived conflict between religion and evolution. Though most undergraduates at secular institutions identify as religious, instructors of evolution at secular institutions are typically non-religious. Instructors' attitudes about religion and assumptions about the relationship between religion and evolution may impact how they teach evolution, and ultimately their students' evolution acceptance. Thus, we interviewed 35 non-religious graduate teaching assistants (TAs) to investigate their perceptions of conflict between religion and evolution and the potential impacts of discussing the relationship between religion and evolution in biology. We then used abductive coding to create a codebook, and after establishing interrater reliability, one researcher used the codebook to code all remaining interviews. We found that most TAs did not perceive inherent conflict between religion and evolution and thought it was possible for someone to accept evolution and believe in a higher power. However, TAs were divided regarding how one could reconcile evolution and a belief in a higher power. For example, TAs had mixed opinions about whether someone could take literal interpretations of religious texts or believe in an active, intervening higher power while still accepting evolution. TAs also had mixed opinions about the impacts of discussing religion and evolution in a biology course. While some thought it could promote inclusion and increase students' evolution acceptance, others worried it could cause certain students to feel excluded. Many TAs also expressed negative ideas about religion and/or religious individuals during the interview that could affect their willingness and ability to discuss religion and evolution in their classrooms. Such negative ideas may then be a barrier to biology instructors' ability to show their students that religion and evolution do not have to conflict, which could in turn affect their students' evolution acceptance.

### **Morality, Molecules and Medical Transcendentalism: Reflections on a "two-eyed seeing" approach to biomedical research**

Cameron Murray, McMaster University

Since 2012, Canada's Institute for Indigenous People's Health (IIPH) has emphasized the Mi'kmaw concept of Etuaptmumk ("Two-Eyed Seeing") as a guiding approach to research. With one eye on Western biomedicine and the other on Indigenous healing beliefs and practices, Two-Eyed Seeing challenges product and profit-driven biomedicine. This paper examines a Two-Eyed Seeing collaboration between an infectious disease expert, an ethnopharmacologist, and an Eskasoni community in Cape Breton, Canada. They hoped to develop a tuberculosis drug derived from a traditional Eskasoni tea made of cow parsnip. Scientifically named *Heracleum maximum*, cow parsnip has also been called "wild rhubarb" and "Satan celery." The Eskasoni call it pakosi or pag'osi and have long used it as a tonic for colds, sore throats and tuberculosis. My paper focuses on moral anxieties expressed by one researcher, Dr. Duncan Webster, during interviews conducted after the "discovery" that the tea triggered the release of interleukin 6, a marker of immunostimulation. Duncan became a medical doctor after getting degrees in chemistry, physics and the philosophy of religion. A self-described "medical transcendentalist," Duncan wrestled with the spiritual implications of "scientifically validating" cow parsnip's traditional usage. I frame Duncan's anxieties as a web of multi-scalar tensions between personal beliefs, the need for molecular "proof", a career-long interest in Eskasoni healing, and a desire to solve a global health crisis. As our conversations unfold, Duncan comes to terms with the impossibility of connecting "this molecular thing" to the traditional processes and practices through which cow parsnip heals. I ultimately argue that, despite his self-awareness, Duncan's collaboration with the Eskasoni still reflects long-standing imbalances of power and

knowledge between Western and Indigenous medicine. Duncan himself, in his pursuit of a global tuberculosis treatment, can't escape what Teju Cole has called the "white-saviour industrial complex."

### **"Religious Scientist" as a Bicultural Identity**

Carissa Sharp, University of Birmingham

Research shows that people can experience themselves as having "bicultural" identities when it comes to social identities such as their ethnicity or nationality. People with bicultural identities have different ways of making sense of these identities, such as separation or integration. Since both religion and science can provide people with social/cultural identities (Sharp & Leicht, 2020; Ysseldyk, Matheson & Anisman, 2010; Jones, Elsdon-Baker, Catto, & Kaden, 2020), we investigated the extent to which bicultural identity theory can apply to scientists who are religious. Across two studies conducted in the UK and Argentina, we used adapted versions of bicultural identity measures such as the Multiracial Identity Integration Scale (Cheng & Lee, 2009) and Malleable Racial Identification (Sanchez, Shih, & Garcia, 2009), as well as questions asking how well these measures apply, along with free response measures, to help understand how religious scientists understand their combined identities.

### **Atheists Thank God: Understanding the Secular Paradox in Latin American Nones**

Carlos Nazario Mora Duro, Tübingen University

Latin America, historically associated with Catholicism, is experiencing a nuanced religious shift marked by the rise of Protestant and Evangelical churches and a notable increase in religious disaffiliation. This paper explores the complex phenomenon of the "nones," which now constitute 18% of the region's population, with considerable variations between countries, ranging from 3% in Paraguay to 35% in Chile. Latin American nations are categorised into three distinct scenarios based on the prevalence of non-religious individuals: those with a high percentage of nones (>20%), moderate non-religious population (10-20%), and low unaffiliated population (<10%). Interestingly, there is a visible correlation between the number of nones and the decline in the Catholic population. The countries with the highest percentage of non-religious people also have the lowest Catholic population in the region. Furthermore, this paper will examine the religious and spiritual beliefs of the nones in particular cases, such as Mexico, Brazil, and Argentina. I contend that this apparent secular paradox, namely the coexistence of religious actions within a non-religious identification, is a well-established pattern within Latin American modernity and its baroque ethos. Social archetypes, such as the "atheist thanks to God," can illustrate the inherent interplay between the religious and the secular in the life trajectories of the nones in the region. By discussing belief in non-religious identity, this research contributes to a deeper understanding of the evolving religious landscape in Latin America and its implications for the broader discourse on modernity and secularisation.

### **An exploration of the stereotypes associated with scientists and (non)-religious individuals across four countries**

Carola Leicht, University of Kent, UK

Research on people's perceptions of the conflict narrative and how those perceptions relate to their own (non)-religious social identities has enriched and expanded the multi-disciplinary study of science and belief in society (e.g. Leicht et al., 2022; Sharp & Leicht 2020). Building on recent research exploring how people's own (non)-religious social identities relate to their stereotypical perception of scientists, atheist scientist and religious scientists (Sharp et al., 2021) this research explores the characteristics that people across 4 countries (UK, Germany, Spain, Argentina) hold about a number of targets. To tap into cultural distinct narratives the targets slightly differed across the countries and are as follows: scientists (all countries), religious individuals (all countries), non-religious individuals (UK, Germany, Spain, Argentina), atheists individuals (UK, Germany, Spain), practicing and non-practicing catholic individuals (in Spain only), and evangelical individuals (in Argentina only). We provided participants with a distinct list of 30 characteristics and first asked to what extent those applied to the target individual (1= not at all; 10= very much) before forcing participants to choose which target would be best described by this characteristic. Using the scale answers we can see that each target is described by a set of characteristics. Analyzing this

data in more depth shows that the extent to which those characteristics are applied to the target is dependent on participant's own (non-)religious social identity. The forced choice answer provided us with additional insights into how these characteristics are used to describe the targets. We discuss how this data contributes to research interested in exploring stereotypes that are associated with the targets. It also provides a novel understanding on how the conflict narrative may or may not contribute to the stereotypes people across a number of countries form about scientists, as well as religious and non-religious individuals.

### **Calling all interdisciplinary internationals: I need you**

Caroline McCalman, University of Birmingham

The INSBS community is both wonderfully international and inherently interdisciplinary. This combination ought to be a golden ticket in today's research economy, but successfully operationalising those characteristics is not straightforward. While funders are ostensibly rewarding interdisciplinary collaborations (even better if they're international too!), there is often very little guidance on what they consider 'interdisciplinary', how it may be embedded in a research program, and what outputs are expected from a project seeking to satisfy the requirements of diverse stakeholders – academic or otherwise.

Poorly managed and ill-defined notions of interdisciplinarity can be counterproductive. In projects where the interdisciplinarity is quite a close relation – say, between economists and sociologists – the barriers to success can be low because the research 'languages' are at least somewhat related. However, in more 'radical' interdisciplinary projects a common outcome is the 'token social scientist/historian/creative'. The frustration felt, and the isolation and condescension experienced by researchers placed in this tokenistic role can have a long-term impact. An initially optimistic and enthusiastic interdisciplinarian may decide to forswear future interdisciplinary collaborations.

My contribution to this year's conference is to outline an ambitious research project intended to investigate interdisciplinarity in practice. I am hoping to mobilise the extraordinary breadth of experience and expertise of the INSBS community in facilitating an international study of past and present interdisciplinary collaborations to understand how and why such projects might succeed or fail. Are there particular methods or mechanisms through which interdisciplinarity can be more effectively operationalised? Do different regional and cultural idiosyncrasies help or hinder interdisciplinary collaborations? Are there top-level guiding principles which funders could incorporate into their requirements so as to strengthen and support interdisciplinary researchers and to ameliorate the present tendency towards tokenism? I hope we can find out together.

### **Teaching Miracles in History Courses: A comparative study**

Chafik Graiguer, ENS-Moulay Ismail University, Meknes, Morocco

In Muslim societies, the intricate interplay between science and religion becomes particularly pronounced in history courses. This is due to the unavoidable need, especially at the precollege levels, to teach ancient history and, consequently, to deal with questions regarding human origins and evolution. In this study, I compare and contrast history courses, related to ancient times, offered in two Muslim countries: Morocco and Saudi Arabia. These two countries exhibit significant differences in how religious teachings are allowed to interfere with the principles of modern historical science.

In the Saudi Arabian curriculum, the Quran is proclaimed as the primary source of history. This curriculum takes the Quranic, and consequently biblical, narratives of Adam and Eve, as well as Noah's deluge, as the starting points of human history. Notably, this curriculum avoids any references to the Stone Age or prehistory. Conversely, the Moroccan curriculum adopts a more science-centered perspective, dating the "emergence" of humans at a staggering 2.5 million years ago. As early as the 6th grade, pupils are acquainted with the notion of Homo sapiens. This curriculum also addresses the Abrahamic religions, including Islam, within the broader context of a "history of religious thought." This approach reflects a more religious-neutral perspective that spans a wide historical spectrum, diverging from the selective focus on specific religious narratives observed in the Saudi curriculum.

In explaining these tremendous differences, I will explore how each country's educational system has interacted with Western educational models. This interaction, I contend, has led to distinct divisions of

labor between Islamic studies courses and history courses, resulting in varied approaches to the inclusion or exclusion of religious narrative within the teaching of history in pre-college levels.

### **Examining the Relationship Between Causal Reasoning about Death and Coping Among Bereaved Family Members**

Claire White, California State University, Northridge

We explored the associations between causal reasoning about death and coping among bereaved family members. We present preliminary findings from interviews conducted with 71 recently bereaved individuals in Los Angeles, spanning diverse religious backgrounds, whose family members passed away due to various illnesses, including cancer and COVID-19, within the past year.

Participants evaluated the extent to which they attributed their family member's death to scientific explanations (e.g., biology causing illness), supernatural accounts (e.g., God's involvement in the death), or a combination of both (coexistence reasoning). Notably, most participants exclusively endorsed natural explanations (54.5%), and almost half of the participants (45.5%) employed coexistence reasoning to explain their family member's death.

Participants also completed a novel Spiritual Treatment-Preferences Questionnaire (STPQ), which included statements such as "comfort care is giving up on God." Higher scores reflected stronger spiritual beliefs about treatment preferences. Our analyses revealed a positive correlation between scores on supernatural reasoning [ $R^2 = 0.157$ ,  $F(1,61) = 11.579$ ,  $p = 0.001$ ] and coexistence reasoning [ $R^2 = 0.160$ ,  $F(1,61) = 11.652$ ,  $p = 0.001$ ] concerning the death of their family member and STPQ scores. No significant relationship was found between exclusively natural reasoning and STPQ scores ( $p = 0.564$ ).

Furthermore, we investigated grief outcomes using two DVs: the Prolonged Grief Questionnaire (PGQ) and the Post-Traumatic Growth Questionnaire (PTG). Higher PGQ scores indicate more intense grief, while the PTG measures positive psychological changes following loss. We observed a positive correlation between scores on the STPQ and PGQ [ $R^2 = 0.095$ ,  $F(1,61) = 6.391$ ,  $p = 0.014$ ] and a positive correlation between scores on the STPQ and PTG [ $R^2 = 0.109$ ,  $F(1,61) = 7.303$ ,  $p = 0.009$ ].

These findings reveal a more nuanced relationship between causal reasoning about death and coping with loss than commonly portrayed in the public perception and have meaningful implications for healthcare professionals.

### **Perceptions of science among practitioners of alternative spirituality**

Danijela Jerotijevic, Institute of Social Anthropology, Faculty of Social and Economic Sciences, Comenius University, Bratislava, Slovakia

The focus of this presentation are collective spiritual activities practiced by urban population in Slovakia. Here studied spiritual groups are informal groups – participants share similar ideas life philosophies, but their cultural models, and norms are much less consistent than of those in traditional churches. Spiritual transformation, observed also among our participants, usually occur when people „are confronted with discrepancies in life that require them to construct a new meaning system because the old one no longer works“ (Paloutzian, 2005: 334). This transformation reflects in „self – perception and identity, life goals, values and attitudes, but also in behavior. It may involve systematic change in interpretation of events, and looking for causalities where before were „just“ chances, as described also by Luhrmann (1989). However, the alternative turn also manifests itself in a specific view of science and scientific knowledge. The presentation will focus on this aspect, i.e. the perception of science through experiences during the pandemic, but also through other circumstances. The research is also interested in the intergenerational transmission of knowledge about science and religiosity within alternative spirituality.

### **U.S. Christian nationalism, communitarianism, and emergent forms of ecofascism**

David E. Long & Joe Henderson, Morehead State University

While Christians in the United States have a long and variable history supporting environmental causes, recent years have seen a rise in explicit Christian nationalist and increasingly associated ecofascist attitudes. Christian nationalism in the U.S. has begun to take up explicit ecofascist positions of increased border security measures, and resource scarcity politics in the name of securing a high quality of life. These developments have been exacerbated during and after the years of the Trump presidency. At the same time, environmental organizations and concerns have continued to proceed with assumptions that knowing the climate is changing will secure pro-environmental action broadly. A rift is growing between these two spheres of climate influence. Environmental organizations far too often assume a communitarian good will be sought by all actors in efforts to achieve a sustainable climate as we attempt to drawdown from our precarious levels of atmospheric carbon dioxide and methane. The sense of environmental stewardship once a hallmark of many Evangelical Christians prior to the Reagan years has been slowly and more recently quickly been overtaken by a much more muscular, dominionist, and patriarchal form of Christian nationalism. While this nationalism has often downplayed environmental concerns in favor of capitalism's primacy, a turn is emerging among Christian nationalists to see the environment and a healthy climate as something to be commoditized and protected as an individual good or for those of their fellow Christian nationalists and like-minded political affiliates. As a look toward the future, how will these greatly differing political projects will likely look and interact will be considered.

### **Science or religion: BBC Radio programmes on mental distress and psychiatry in the 1950s**

Deborah Cohen, University of Birmingham

The BBC is known for educating, informing and entertaining its audiences. But it has also provided support for listeners and viewers in mental distress since it began just over a centenary ago, contrary to the traditional view that public conversations about our feelings began much more recently. Over the decades the messages put across changed. My research explores who was influencing the choice of speakers and programme content in the post war period. From my study of the BBC Written Archives I argue that although psychiatry at the time was attempting to raise its profile as a medical and scientific specialty, the profession did not initially attract the attention of producers with an interest in science. Rather, the majority of programmes about mental distress were being produced by religious broadcasters, in response to letters from listeners in need of help. My work also shows that once the BBC Religion department had taken on this territory it received a lot of criticism and challenge from the scientifically inclined production staff in the Talks department.

### **Religion, Rituals and Techno-Scientific Objects: Reading the Religious and Ritualistic Life of India's Space Program**

Dipak Kr Chakraborty , Indian Institute of Science Education and Research Bhopal, Madhya Pradesh (India)

Recently, religious worship of techno-scientific objects like rockets, or spacecrafts by the Indian Space Research Organization/ISRO scientists according to the Hindu religious rituals have spurred controversy in the media regarding the decline of 'scientific temper' in India. However, worshiping of techno-scientific objects following religious rituals in this manner is nothing uncommon. STS scholars have shown that, being in a Hindu-majoritarian country, scientist-worshippers often support Hindu religious practices in techno-scientific contexts by dubbing the Hindu rituals as national culture (Thomas and Geraci, 2018). In this process, they differentiate it from other religious rituals, which are not seen as cultural. Space scientists and engineers at the ISRO are not an exception to that, as they have inaugurated important launches or missions through worshipping the Hindu deities. The paradoxical presentation of 'religious' and 'cultural' elements by Indian space scientists-engineers though seem surprising, especially in the context of space program such practice may be rooted in the country's long historical tradition of imagining spaceflight. By examining mythical imaginings of spaceflight and flying machines in India dovetailed with the native science fictions (SF) in this regard, it will be argued here, that techno-scientific objects related to spaceflight has often conceived as integral to the Hindu culture. Such Hinduized perception of spaceflight had flourished through the new colonial literary genre of SF at a time (early 20th century), when the vision for a technological India became a powerful discourse in the public sphere. It is in this entanglement of technological nationalism and Hinduized perception of spaceflight, the roots of religious worshipping of modern



rocketry in India may be located. Taking references from STS scholarship, this paper would like to suppose, perhaps the Hindu religious-culture provides a vocabulary in India to translate an actualised foreign technology like spaceflight in local terms. Over time, probably such indigenization efforts have contributed to its larger socio-cultural acceptance by the general public evidenced by enthusiastic coverage of space missions and rocket/missile launches in India, sometimes the news of which also reaches the public through the sight of ISRO personnel involved in puja.

### **Synthesis of Spirituality and Science: Buddhist Monks Merging Medicine and Religious Belief in Early Medieval China**

Dong ZHAO, Beijing Foreign Studies University

This paper explores the intricate interplay between Chinese Buddhism and empirical medical science during the formative period of this religion in early medieval China (220-589 CE). Focusing on the convergence of Buddhist spirituality and science, the study investigates the transformative role of Sengyi, or Buddhist monk physicians, in harmonizing medical science and Buddhist religious beliefs. Since the entry of Buddhism into China, Buddhist monks initiated a cultural shift by intertwining spirituality with the empirical pursuit of medical knowledge. Early medieval China witnesses the harmonious integration of Buddhist religious principles with scientific pursuits. Chinese monks, deeply rooted in both the Buddhist religion and medical sciences, played a pivotal role in enriching the empirical understanding of medicine.

The study addresses questions regarding the (religious or medical, or both?) techniques employed by medical monks in integrating religion into medical texts and assessing its perceived role in medical expertise. It also delves into the temporal, contextual, and spiritual dimensions of these techniques during early medieval China. Monastic practices, mantras, ritual worship, and supernatural means recorded in various sources offer a nuanced understanding of the symbiotic relationship between spirituality and healing. Contrary to the perceived dichotomy between religion and science, Chinese Buddhism emerges as a facilitator of scientific inquiry. The concept of Wuming within Buddhism actively promotes medical science. Numerous Chinese sutras delve into medical knowledge, portraying a holistic approach where spirituality, guided by Buddhist religious beliefs, complements empirical, medical understanding.

In conclusion, this study contributes to the formative, evolving narratives of the synthesis of spirituality and science in early medieval China. By unraveling the harmonious integration of religious principles and empirical healing practices, guided by Buddhist religious beliefs, the research showcases the enriching synergy between Chinese Buddhism and empirical medical knowledge, providing new insights into the historical development of Chinese medical science.

### **Spirited Away: Agnes Elisabeth Guppy, the Flying Victorian Medium**

Efram Sera-Shriar, University of Copenhagen

In the summer of 1871, a media sensation erupted in the spiritualist press. According to reports, the medium Agnes Elisabeth Guppy allegedly travelled three miles across London by spirit apport into a locked séance room. The spectacular nature of the event generated much discussion by believers and sceptics alike, and raised important questions about whether the event even happened. Was the story nothing more than a well-crafted publicity stunt? Guppy had a stellar reputation in London's spiritualist community and many argued that she was one of the most powerful psychics to have ever lived. Much of her credibility was tied to an early endorsement she received from co-discoverer of evolution-by-natural selection, Alfred Russel Wallace. In the mid 1860s, Wallace, with the help of his sister Fanny Sims, led a series of investigations to determine if Guppy's mediumship was real. The results were published in various journal articles and books. An amazing range of phenomena occurred during Guppy's séances, but she was most famous for her spirit apports, which is a kind of manifestation where regular everyday objects suddenly materialized inside locked séance rooms without any apparent human intervention involved. The fact that Guppy had been apporting objects into her séances for several years leading up to the event in 1871, added substantial weight to the claim that she had been carried by spirits three miles across the city. This paper will explore the case by looking at the ways in which science, belief and print media played important roles in shaping Guppy's credibility as a genuine psychic.

## **Moral Emotions' Role in Christian University Students' Perceptions of Science**

Erin I. Smith (non-attending co-authors: M. Elizabeth Lewis Hall, Nicole Chang), California Baptist University

Given the importance of science in the modern world, perceived conflicts dividing scientists and religious communities are problematic. Although discourse about conflict between religion and science at the academic level is primarily concerned with content, Evans (2018) argued that science-religion conflicts at the popular level are experienced as moral conflicts. The current research adds to ongoing explorations of the moral territories of science and religion (e.g., Chan, 2018; Rutjens & Heine, 2016; Simpson & Rios, 2019), moving beyond shallow-end issues (Spencer & Waite, 2022). We conducted two experimental mediation studies (Pirlott & MacKinnon, 2016) to examine five hypotheses concerning the role of moral emotions in shaping perceptions of scientific claims among undergraduate students at two private Christian universities in the U.S. Study 1 (n = 100) examines the plausibility of a causal link by demonstrating statistical mediation between scientific claims and subsequent responses to these claims by other-condemning moral emotions (e.g., anger, contempt, disgust). Using similar methods as research examining moral emotions and political divisions (e.g., Feinberg & Willer, 2015), participants read a short description of a scientific topic (e.g., artificial intelligence) framed neutrally or with keywords that violate the purity and authority moral foundations. Study 2 (n = 100) manipulates other-condemning moral emotions by framing scientific topics as either violating or appealing to a moral foundation. This manipulation will establish evidence for the causal effect of moral emotions on judgments and action tendencies concerning scientific content. Both studies also explore how moral foundation commitment, intrinsic religiosity, theistic intellectual humility, contemplative practices, religious participation, religious identity, fundamentalism, and scientific identity moderate how the claims shape moral emotions. At the submission date, data have been collected, and analyses are underway. These results will contribute to understanding whether, why, and when other-condemning moral emotions influence how religious people evaluate scientific claims.

## **The Role of Modernity, Science and Technology in the Christian Discourse of Eschatology in Lokoja Metropolis**

Gabriel Odion Obomese, The Federal University, Lokoja-Nigeria

The term "eschatology," denotes a significant event in human and global history, in the monotheistic religions of Judaism, Christianity, and Islam. In Christianity, it talks about the future reign of God and the events preceding the end time. Interestingly, the discourse surrounding eschatology appears to be defined by modernity, science, and technology implicit in the conversation of my interlocutors in Lokoja metropolis. This is largely due to social, cultural and economic changes in man's embrace of technology, science and the impact of the 21st century in the everyday life. Therefore, this study employs a phenomenological research methodology to examine the shared life experience of my interlocutors and how they conceive eschatology from the cosmological and technological backgrounds. Key issues for interrogation include (but not limited to) genetically modified organisms (GMOs), the aesthetic nature of material things, such as automobiles, gadgets, Lesbian, Gay, Bisexual, Transgender/Transsexual Queer (LGBTQ) and designs in the Lokoja Metropolis. The study aim to reveal the peoples' attitudes, thoughts, and understanding of modernity, science, and technology and its overall influence on the Christian discourse of eschatology. According to preliminary research, Christians in the metropolis of Lokoja no longer understand eschatological events from the Bible but rather in terms of modernity, science, designs, and aesthetic values in tangible assemblage of material sciences and technology as they are presented in the digitalization of devices and lifestyles. It also reveals that Christians in Lokoja Metropolis are now curiously engaged using technological advancements to demystify eschatology, which brings to mind the long-standing dance between religion and science. Therefore, this work argues that because of its impact on institutions and culture, the new approach of "eschatologizing" in Christian religion from the perspective of modernity, science, and technology rather than from the Biblical stance, should be evaluated.

## **Maternity Shoot Spectacles on Social Media and the Violation of Yorùbá Pregnancy Taboos**

Ganiyat Tijani-Adenle, Lagos State University, Nigeria

Pregnancy was (and remains) a very private matter in traditional Yorùbá culture. Located in the six states of South-West Nigeria and in a few North-Central States of the West African country, the Yorùbá people are very spiritual, and they believe in the powers of the unseen, the havoc that envious/jealous people can wreak (spiritually), and the need to be protective of "Gods blessings", particularly precious ones like pregnancies. The Yorùbá culture emphasises the sanctity of pregnancy, and the need for women to hide this information from the public, including from (un)trusted family members/friends. A Yorùbá woman is expected to fix a pin on her underwear to prevent evil spirits from attacking the baby, avoid miscarriages, stillbirths, or the birth of infants with congenital diseases. The current social media spectacle of Yorùbá women posting maternity shoots and pregnancy bumps is strange to the Yorùbá culture. Guided by technological determinism theory, this qualitative study investigates stakeholders' (gynecologists, Yorùbá/media scholars, women who shared maternity images on social media, and general Yorùbá people) perspectives of this practice and how improved knowledge of gynecological issues, as well as the proliferation of digital and social media, are moderating Yorùbá cultural beliefs and practices about pregnancy. Preliminary findings indicate that while an increasing number of Yorùbá people (particularly among the Millennials and Generation Z) are now more open about their pregnancies, the entrenched Yorùbá belief in the ability of people to spiritually attack and hurt pregnant women and/or their unborn babies is still entrenched in the Yorùbá pregnancy culture. There are also similarities between this aspect of Yorùbá culture and those of Christianity/Islamic doctrines (widely practiced by the Yorùbás) about the abilities of evil forces and demons to harm people and this has sustained the Yorùbá privacy culture about pregnancy to date (particularly among the older generations).

### **Scientific and Supernatural Reasoning about Illness and Death During COVID-19**

Hannah Lunkenheimer, University of Texas at Austin

A fundamental task for all humans is to explain why misfortune happens. Considerable research on causal reasoning suggests that scientific understandings of illness and death often coexist with supernatural explanations (Harris, 2011; Legare & Gelman, 2008; Rosengren et al., 2009). For instance, explaining the onset of illness as the consequence of a viral infection and divine punishment for moral discretions. However, conclusions about coexistence reasoning are drawn from hypothetical scenarios rather than drawing on participants' lived experiences, which raises concerns about ecological validity. We examined the prevalence of causal explanations for illness and death during the global COVID-19 pandemic when bio-medical explanations were readily culturally available. Participants (N = 147) were religiously diverse Los Angelinos who had suffered from a severe illness or bereavement during the pandemic. They participated in a structured interview on the causes of their misfortune, answering questions such as "Why did this misfortune happen to you?"

As expected, natural causes such as biology causing COVID-19 were most frequently endorsed for illness and death, and coexistence reasoning was the second most frequently endorsed explanation. Of further interest, our analyses revealed no significant associations between the type of causal reasoning and type of misfortune, the target of the illness (self or other), or religious affiliation. Most importantly, individuals who employed coexistence reasoning to explain their misfortune had higher levels of Posttraumatic Growth (PTGI-SF; Cann et al., 2010) than individuals who employed single frameworks (natural or supernatural). These patterns are consistent with a prominent meaning-making model of coping (Park, 2010). Overall, data support that co-existence reasoning is pervasive across diverse, culturally constructed belief systems and historical circumstances (Legare et al., 2012). We provide the first evidence that co-existence reasoning is commonly employed to explain personal misfortune and, in some contexts, is associated with psychological benefits.

### **Exploring Clinicians' Perceptions of Patients' Religious Experiences in Illness: A Qualitative Inquiry**

Hannah Waite, The University of Aberdeen

Over the last decade medical, psychiatric and psychological literature has emphasised the need for clinicians to understand and address an individual's spiritual needs as a part to a holistic approach towards patient care and treatment (Koenig, 2013; Harris, Randolph and Gordon, 2016; Hunt et al., 2016; van Nieuw et al., 2018; Abdulla, Hossian and Barla, 2019; Diego-Cordero et al., 2023; Milner et al., 2023). However, there

has been little research into how clinicians specifically understand the religious experiences of their patients in the midst of illness. This is an interdisciplinary piece of research that seeks to bridge this gap. The research examines the interplay between the scientific medical understanding of such experiences, patients' religious experiences and how mental health clinicians' approach, understand and subsequently care for patients. (For example, does a clinician who is religious understand these experiences in a different way from a clinician who is not religious, and does this subsequently impact the treatment options for a patient?)

Semi-structured interviews are used to examine how clinicians understand patients' experiences; are they understood purely as a facet or symptom of illness, and as such, are they perceived as something that is negative and needs to be treated? Can they be understood as meaningful and positive experiences for certain individuals? Or is there some meaningful combination of the two, in which the clinician can understand that these experiences of divine realities are indeed aspects of a patient's diagnoses, but are equally meaningful religious experiences for the patient?

The research provides a nuanced approach to clinical understandings of divine realities by exploring first how clinicians understand a patient's religious experience, and secondly, the significance (be that positive or negative) of religious experiences for patients during illness. Moreover, the conclusions of this work enable a deeper understanding of these experiences for the benefit of future patients.

### **Harmonizing Science, Religion, and Education in Environmental Preservation: Challenges and Perspectives**

Hesley Machado Silva, State University of Minas Gerais and University Center of Formiga

For the past decade, conservative governments have adopted inappropriate and harmful policies in the face of environmental crises, influenced by misinformation, particularly regarding climate change and deforestation in the Amazon. These actions have been amplified on social media and supported by conservative religious groups. In Brazil, the former president, Jair Bolsonaro, was broadly supported by Christian conservative groups and encouraged mining and other activities harmful to the environment in indigenous lands. Moreover, Bolsonaro withdrew the country from the Paris Agreement, an environmental treaty limiting greenhouse effect gas emissions. The objective of this paper is to identify possible convergency points between science and Christianity, highlighting biblical passages that endorse environmental preservation and can be interpreted in harmony with religious beliefs. The author carried out a theoretical analysis based both on the Bible and environmental research. We argue that nature is seen as a divine creation in Christian scriptures, therefore demanding responsibility, and care from humanity. Additionally, environmental preservation goes beyond belief or non-belief in a particular religion. As history witnesses' changes in religious perspectives, similar to the evolution of Christianity regarding slavery, the convergence between religion and science can play a vital role in awareness and action for environmental protection and establish a barrier to scientific denialism. In conclusion, communication between these fields should emphasize that environmental preservation is a shared interest, exceeding religious differences, and promoting a reconciliatory environment. This could be especially important for educational policy and schools in societies affected by religious radicalism.

### **Neo-Thomism and Atheism**

Ignacio Silva, Universidad Austral

Late-nineteenth and early-twentieth century Neo-Thomists engaged with the notion of a world without God mostly by examining ideas regarding the evolution of life on Earth. Their discussions, however, followed different strategies. This paper will present the development of some of these strategies in three different stages of the Neo-Thomist school. The first stage includes authors writing before the turn of the century, such as the Juan González Arintero, OP (1860-1928) and Juan José Urráburu, SJ (1844-1904). They explicitly opposed atheism, particularly the form of atheism that sprung from the consideration of evolutionary theories. Urráburu's lengthy discussion of evolutionism, for instance, starts by explaining 'atheistic and universal transformism'. The second stage, with authors who wrote before Sartre's 1943 *Being and Nothingness*, includes the works of Cardinal Désiré Mercier (1851-1926), Édouard Hugon, OP (1867-1929), and Joseph Gredt (1863-1940). These authors wrote well-circulated handbooks on Thomist

philosophy and theology, and even if they did not engage with atheism as a theme, they did reflect on the question about a world without God in their discussions about monism, materialism, mechanicism, and, as one would expect, the theory of evolution. Perhaps an exception to this strategy within this stage is the small apologetic work by Joseph de Tonquédec, SJ (1868-1962), *Une preuve facile de l'existence de Dieu* (1918), in which the author suggests how to 'escape from the atheist state of mind' considering the order of the world, with the goal of answering 'the first and most important question of the atheist'. Finally, the third stage involves authors that directly distinguish between existential and scientific atheism after 1943, such as Régis Jolivet (1891-1966), H. D. Gardeil, OP (1900-1974), and the Étienne Gilson (1884-1978), among others, in which the theme of atheism becomes more prominent.

### **Combating Smallpox in Colonial Fringe Areas in India: The case of Chotanagpur and Santhal Parganas in the nineteenth century**

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This paper aims to contest the prevalent narratives on the native experiences of smallpox epidemics in colonial India, which generally focus on big cities, major presidencies, and other significant locations. By focusing on two fringe areas of the Bengal presidency i.e., Chotanagpur and Santhal Parganas, the paper discusses the diverse experiences of smallpox by marginal native communities, including the tribal communities. It also attempts to transcend the existing scholarly binaries between religion and science (secular) and explore how such categories intersected and interacted.

Smallpox had specific religious-spiritual associations. In eastern India, the natives widely attributed smallpox to the coming of devi (goddess) Sitala. Subsequently, they performed a series of rituals to appease the devi. Most of the Europeans and the colonial state (also a section of upper-class natives) overemphasised such religious aspects of smallpox by disregarding relatively non-religious practices like variolation, and thus, considered the native beliefs and practices superstitious. Through such selectivism, which Ranajit Guha has called "statism", the Europeans attempted to criminalise and overthrow the native methods of variolation. Initially, the Europeans utilised the variolation to counter smallpox in India. However, with the introduction of vaccination, the state started persecuting and criminalising the variolators because of the religious associations. Though these were broad trends, the way they unfolded in the fringe areas had some specificities. The paper will discuss in particular how policy measures had only partial success due to the "fractured" nature of the colonial state and other limitations like economic rationalities of the fringe areas. The colonial state had to rely on a dual process of coercion and consent to establish hegemony which was more difficult to attain in fringe areas. In the process, the supposedly religion-science binary was also trespassed, as vaccination accommodated some (folk) religious elements to achieve the desired popularity.

### **Women, Science, and Religious Beliefs: Exploring Women's participation in STEMM Education in a phallogocentric Nigeria**

Irene Ene Unazi, Federal University Lokoja, Kogi State Nigeria

The study examined the factors that affect women's participation in STEMM education in a phallogocentric Nigerian society, focusing on the north-central Nigerian states of Benue, Nasarawa, Kogi, and the Federal Capital Territory. Four research questions guided the study, and two null hypotheses were tested at a 0.05 confidence interval. The study was a survey research design, with a sample size of 820 women and female undergraduates in STEMM fields as well as parents and religious leaders from the two major religions in Nigeria (Christianity and Islam) in North Central Nigeria. A stratified random sampling technique was used to draw a sample size of 450 for the study. The study employed quantitative and qualitative research using questionnaires and interviews for data collection, with 0.96 and 0.85 obtained as the reliability indices of the questionnaire and interview, respectively, using the Cronbach alpha coefficient method. The data obtained using questionnaires were analyzed using mean, standard deviation, and independent t-test statistics, and the recorded interviews were transcribed and coded. Preliminary findings suggest that there are a limited number of women in STEMM education, and religion and culture play a major role. The study further revealed that there is a significant difference in the mean response scores of Christian and Muslim parents and religious leaders on the effect of culture and religion on women's participation in STEMM education in North Central Nigeria. Among the recommendations were that educational

institutions, parents/guardians, opinion leaders, and policymakers should consider encouraging gender inclusivity and equality to promote women in STEMM education in Nigeria. This may include mentorship programs, curriculum adaptations, and awareness campaigns addressing societal norms.

### **Haldeman-Julius and his "Little Blue Books" series**

James C. Ungureanu, Stony Brooke School, NY

In the 1920s, atheist and socialist newspaper publisher Emanuel Haldeman-Julius (1889-1951) began printing his cheap, paper-covered "Little Blue Books" series. He sold an estimated 500 million copies of these pocket-sized books to working-class and middle-class Americans. As "publisher for the masses," Haldeman-Julius intended the Little Blue Books to be a "University in Print," and included a great mixture of classical literature, novels, how-to manuals, and essays on sexuality, politics, philosophy, history, religion, and science. Haldeman-Julius also played a large, albeit almost forgotten, role in the life and literary careers of Will Durant, Bertrand Russell, and Clarence Darrow. Perhaps most important, ex-Catholic monk Joseph McCabe published numerous titles in Haldeman-Julius's series. One of the most successful books in the series was, interestingly enough, his *The Conflict Between Science and Religion* (1927). In this work, McCabe essentially repeated the narratives of John W. Draper and Andrew D. White, but argued their liberal Protestant attempt to reconcile "science and religion" was "bunk." In this paper, I argue that McCabe, Haldeman-Julius, and the "Little Blue Books" played a central role in spreading "scientific materialism" and the "conflict thesis" to American readers in the first half of the 20th century. Rather than Draper and White, the real origins of the "conflict" between science and religion can be found in these "Little Blue Books."

### **The limits and uses of the history of science for contemporary engagement: the case of Reijer Hooykaas**

Jelmer Heeren, Vrije Universiteit Amsterdam

Throughout the years, the history of science has been used (and/or abused) by apologists in order to promote particular worldviews, whether naturalist or religious. Among professional historians of science, Dutch historian of science Reijer Hooykaas (1906-1994) was sometimes accused of pushing his Protestant, Calvinist position. In particular, his *Religion and the Rise of Modern Science* (1972) drew criticism from other historians of science. In this paper I explore the limits and uses of historiography of science in relation to contemporary, worldview-related issues. I will do so by using Hooykaas as a case-study. Firstly, I will describe Hooykaas' own explicit intentions with his work as a historian of science as well as his thoughts on themes such as neutrality, objectivity and worldview. Secondly, I will provide examples of how Hooykaas engaged with contemporaries over differences of opinion. Lastly, I will contextualize Hooykaas' attempt to speak to contemporary issues by comparing it to similar attempts by historians in his time.

### **The Jesuit Engagement with Psychology in 20th Century India: A Preliminary Exploration**

Joseph Satish Vedanayagam, Saveetha Engineering College, Chennai, India

The history of the relationship between Catholicism and psychology is fraught with twists and turns. Psychology was usually condemned or treated with indifference until the mid-twentieth century. During and after the 1960s however, the Catholic hierarchy unofficially endorsed the discipline – this even included an openness towards the use of psychoanalytic methods for pastoral care. Historically, the Jesuits have played an important role in developing a "Catholic" version of pastoral psychology, prominently in Western Europe and to a lesser extent in the United States. Much less is known of the practice of psychology among the Jesuits in the mission stations, notably in South Asia. This paper discusses the work of two Jesuits in India – Walter Utarid (1894-1980) and Emilio Ugarte (1903-1990) – and their contributions to the study of psychology in India. While these two Jesuits cannot be credited with any pioneering contributions to the discipline, their contributions in terms of teaching Jesuit seminarians and the development of educational psychology in India are significant. This paper explores the contributions of Fr Utarid and Fr Ugarte based on hitherto unexplored archival material and some published sources. This paper hopes to contribute to the literature on psychology and religion/spirituality by exploring how these two Jesuits envisioned the

role of “secular” psychological methods in pedagogy and pastoral care in the early and mid-twentieth-century Indian subcontinent. The paper also seeks to throw some light on how the Catholic Church in India dealt with the field of psychology, whose use was largely frowned upon across Catholic Europe in the early twentieth century.

### **Narrative and Ideology in Scientific Discourse: Evolution and Atheism in Mexico**

Juan Manuel Rodriguez Caso, National Autonomous University of Mexico

Discussion of evolution inevitably leads to a conflict between science and religion. At least that perception is recurrent in popular terms and within academia. In geographical contexts such as the United States, the history of this dispute is well known in terms of so-called “evolutionism” and “creationism”. Now, this same logic has transcended to other contexts, as is the case in Mexico. This paper seeks to take up how Mexican academia has become a promoter of the New Atheism agenda, considering that biology should be considered solely in terms of Darwinian evolution, not only in terms of scientific implications but also in terms of social implications. On the one hand, an analysis of how evolutionary thought is presented and disseminated in Mexico will be presented, followed by a reflection on the implications of this evolutionary vision as a form of defence (at all costs) of a materialistic and atheistic worldview, which is considered inherent to the Darwinian evolutionary explanation itself.

### **Tracing the Popularization of Anthropogenesis in Polish Science Magazines**

Katarzyna Jarosz, University of Logistics in Wrocław (Poland)

Wanda Stęślicka-Mydlarska a renowned paleontologist and one of Poland’s foremost science popularizers, wrote the following on the popularization of anthropogenesis: “The issue of human origins is one of the most passionately engaging biological problems, fascinating not only naturalists but society as a whole since ancient times.” The aim of my presentation is to analyze how anthropogenesis was popularized in Polish popular science magazines from the mid-19<sup>th</sup> century to the 1970s of the 20<sup>th</sup> century. The chosen time frame, from the publication of “The Origin of Species” (1858) to the establishment of the Paleoanthropology Society (1992), is symbolic. For the analysis, five popular scientific journals were selected, two of which have a religious-social-scientific profile, while the other three declare themselves as worldview-neutral. In total, 314 articles were analyzed. In questions regarding human origins, there is a clear diachronic shift in the magazines under consideration, moving from conventional biblical concepts about distinct human origins to a more naturalistic explanation that connects the world’s races to a shared organic ancestry with plants and animals. In religious magazines, the creationist trend persists for a significantly longer duration (until the late 30s of the 20<sup>th</sup> century), with a greater number of articles adhering to this perspective. The articles cover an extensive range of topics, including the course of human evolution, the theory of anthropogenesis, the path that led to Homo sapiens, the position of Homo sapiens sapiens in the genealogical tree of hominids, its potential connections with Neanderthals, evolution of human speech, or the architecture of the skull. The great majority of the authors were renowned paleoanthropologists or archaeologists, both Polish and foreign. Among the authors featured were Bryan Vaughan, Philip Lieberman, specializing in the origin of language and human evolution, and Richard Leakey.

### **Scientists in African Congregations: Shifting Perspectives of the Conflict Thesis between Faith and Science**

Kevin Muriithi Ndereba, St. Paul's University

The conflict thesis remains a popular view in the interface between faith and science. This is evident not only within faith communities but also within non-religious communities. This research uses a qualitative social-scientific method to explore how scientists in select Christian congregations in Africa (Kenya) understand their scientific and faith backgrounds – noting points of tension and also how they creatively navigate the conflict narrative in popular and Christian culture. The implication of this research is (1) to shift the narrative of the conflict thesis of faith and science; (2) to nuance the discussion in light of the dynamic worldviews inherent within the African context, including but not limited to, African traditional

worldviews and cultures, scientific worldviews and Christian worldviews in dialogue; and, (3) to provide a basis for scientific engagement in society through engaging Christian congregations that are a key feature of many African societies.

### **The modern “St. Basils”: Militant religious astronomers in the Greek state (1920-1990)**

Kostas Tampakis, National Hellenic Foundation

Dimitrios Kotsakis (1909-1986) and his mentor Stavros Plakidis (1893- 1990) were the two main astronomers working in Greece for more than half a century. Having studied in some of the best European observatories, Plakidis and later Kotsakis trained most of the astronomers who came after them, fought for and helped create a new Astronomical Observatory and published astronomical observations in international journals. Alongside their scientific work, they had time to write popular books and to organize and deliver lectures for the general public. It is thus noteworthy that both astronomers were not only militant anticommunists, but were also deeply involved in Orthodox para-ecclesiastical organizations. This paper aims to discuss the relations between their astronomical work, their religious affiliations and their militant anti-materialism, in the context of pre-WW2 and Cold War era Greece.

### **Ardas(Prayer) and Allopathy: A Study of Gurdwara Bangla Sahib**

Kulbir Kaur, Shyama Prasad Mukherji College, University of Delhi

Are religion and science opposed to each other? Or is there any intersecting point? In India, it is often said, even by medical professionals, that a combination of 'dava' (medicine) and 'dua' (prayer) can effectively cure chronic illnesses. This paper highlights the co-existence of religious beliefs and scientific practices in everyday life. Contrary to Comte's theory of linear progression towards positive understanding, which requires the replacement of gods with the religion of humanity, some societies prefer to maintain a balance between theological and positive stages. The metaphysical stage can provide a perfect 'in-between' understanding to people, combining 'worship' with 'medicine'. As rightly viewed by Parsons that illness is a social phenomenon, not only a physical condition.

Gurdwara Bangla Sahib, a sacred place associated with Sikhism, is known for its healing powers. There are numerous 'lived experiences' attributed to the miraculous powers of the holy water. But the gurdwara is also famous for offering free or nominal charges for various treatments in the hospital and diagnostic center. During the COVID times, the Sikhs were the first ones to provide oxygen cylinders free of charge. This paper will try to present the intermingling of 'faith' and 'medicine' with special reference to the Gurdwara Bangla Sahib.

### **For an Experience-Based Study of the Relationship Between Science and Belief. The Case of Fin de Siècle Transmutational Alchemy**

Leonardo Anatrini, Università degli Studi di Firenze

This paper discusses the possibility of implementing the reproduction of alchemical experiments through the lens of experience-based historical-scientific research, with the aim of practically investigating the historical relationship between science and belief. The discussion is centred around the case study of transmutational alchemy between the late 19th and early 20th centuries and its role within traditions, such as occultism and the Theosophical Society, which were constantly seeking an epistemologically impracticable synthesis between science and esoteric beliefs.

As early as the 1970s, a small number of academics had already emphasised the potential usefulness, for historiographical purposes, of following in the footsteps of the alchemists themselves, attempting to replicate their experiences and supposed achievements. The more recent reinterpretation of this approach to historical research is based on the concepts of reworking, reproduction, and re-enactment. 'Reworking' refers to the process of creating devices that philologically conform to the source information (such as technical equipment and reagents). With 'reproduction', on the other hand, attention is given to the end products. In the case of alchemy, this implies that the hermeneutics of the texts must be corroborated by autoptic and analytical evidence concerning the execution of the experiments and their outcomes. Finally, 're-enactment' places further emphasis on practice, aiming to obtain a sensory



understanding of the given experiment for historiographical purposes. This latter concept, in particular, conveys the possibility of triggering a process of mimesis with the original author whose texts are placed under investigation and put to the test, ideally favouring the practitioners dedicated to the repetition of the experiments in achieving a more direct understanding of the *forma mentis* of their original creators, no longer necessarily mediated by the hermeneutics of the texts. Thus, this methodology offers a concrete opportunity to enhance the scientific and historical study of the relationship between science and philosophical/esoteric/religious beliefs and identities.

### **Privatization, Forensic Doctors and Ethical Issues around Forensic Labs: A Comparison Study between China and the West**

Linjie Zhang, The University of Edinburgh

In response to the trend towards interdisciplinarity, forensic science, as an intermediary linking law, medicine, beliefs, ethics, and the history of science and technology, is one of the most appropriate disciplines for interdisciplinary research. Except for the influence of policies and technology, the application of forensic science is still under the impact of the Chinese religious culture of keeping the body intact after death. Current studies on Chinese forensic science focus on its history and technological development, instead of the privatization of forensic labs and the plight of individuals (forensic doctors, victims, perpetrators) associated with forensic science. Individual perspective is missing in the social investigation of forensic science. This research addresses the following questions: (1) how privatization appears in the development of forensic laboratories; (2) how the different roles of forensic doctors in China and the West transform in the privatization of forensic laboratories; (3) how Chinese forensic doctors deal with the conflicts between empathy, beliefs, science, and law. Based on the comparative historical methodology and qualitative methods, the study explores the development history and technical improvement of Chinese forensic labs, and the different roles between Chinese forensic doctors and Western forensic doctors since the 1980s. It aims to reflect the exchange in forensic science and differences in forensic applications between China and the West. The study suggests that the tension between scientific norms and beliefs impacts the application of forensic science, such as autopsy and drug detection. To respect beliefs, ethics, and cultural customs or to defend law and science is the dilemma that forensic doctors confront during the privatization of forensic laboratories.

### **Impact of Cultural Beliefs on Infant and Maternal Welfare in the Bamenda Plateau: 1922-1961**

Lueong Nina Prazil Lienjeh, University of Bamenda

In most African societies, there were cultural beliefs that guided the organization and functioning of societies with some of these beliefs directly concerned with conception, pregnancy and childcare. Using the Bamenda plateau as the theatre, this paper sets out to investigate the implications of cultural beliefs on infant and maternal welfare. The research employed primary and secondary sources of data. The primary sources were; archival repositories and oral interviews and the secondary sources constituted books, published articles and unpublished documents. The historical, qualitative approach was used in data analysis, interpretation and documentation. This research submits that; across the Bamenda plateau, it was belief that; a retained placenta during delivery was a proof of marital infidelity and the man would die if he sees the woman. This led to the woman and baby being abandoned. Bleeding during pregnancy was a sign of sorcery and twined fibers from raffia palms were tied round the woman's waist for protection which often led to stillbirths, premature births and mortality. The consumption of "Ndowre" a local herb will reduced the length of contractions and the perception of pain which caused many women to rely on these herbs and forsook medical attention causing complications during delivery leading to neonatal deaths and in some cases postpartum deaths. Aside these, there were other beliefs that were specific to the different ethnic groups. Amidst these beliefs, Britain introduced western biomedical infant and maternal welfare services through antenatal clinics (ANCs), maternity delivery, and infant welfare clinics (IWCs) as initiatives to stamp out these cultural beliefs and reduce the toll of mortality. The biomedical welfare package included education on the importance of; hospital birthing, quality nutrition, sanitation and general hygiene as well as curative healthcare services. These western biomedical services shaped the cultural setting of the Bamenda plateau and reduced the infant/maternal mortality rates from an estimated 256 per thousand neonatal deaths in 1927 to an estimated 138 per thousand neonatal deaths in 1961. Notwithstanding efforts to encourage the utilization of biomedical welfare services that led to a decline in

infant/maternal mortality, some cultural beliefs still persisted and consequently risked the survival of infants and women.

### **Religious Publics, Religious Politics, and Scientific Controversies in Turkey**

M. Alper Yalçinkaya, TED University, Ankara

Recent research suggests that people's attitudes toward scientific issues can be mediated by a range of identities. Both gender and political identity may also shape perspectives on the relations between science and religion. In this talk, we present our findings from our INSBBS-funded project on how religious people in Turkey perceive three scientific issues that have generated controversy in recent years: vaccination (especially mRNA vaccines), gender and sexuality, and climate change. Focusing on these three issues, we discuss the ways in which not only science in general but particular types of scientific expertise, including expertise in the social sciences, are perceived by religious Muslims in Turkey, and the degree to which scientists are seen as trustworthy. We compare the views of religious political elites and ordinary religious citizens, and analyze the extent to which official and elite views shape the views of religious political parties' assumed constituencies. Based on our findings, we discuss the ways in which both political identity and gender may inform attitudes toward controversial scientific topics.

### **Religious Origins of the Modern Urban Water Management in Princely Travancore, Colonial India c. 17-20 cent. CE**

Mahendranath Sudhindranath, Indian Institute of Technology Madras, India  
John Bosco Lourdasamy, Indian Institute of Technology Madras, India

This paper aims to throw light on the evolution of urban water management in a colonised society. Any state has to manage and control the water resources to establish its authority over the public in an agrarian society, as water is a prerequisite for sustaining human life. The princely state of Travancore in the southwestern part of India is an interesting case to look for historical hydrological relations between the state and society. Given the divine association of the water bodies of the capital city - Trivandrum - with its religious centres, it is insightful to look into the transition of the spiritual aspects of water management to the scientific prerogatives of 'public health' and 'town improvement'. The conception of the public was shaped by the socio-political ideas that existed in a given space and time. The pre-modern arrangements made for the management of these spiritual waters were incorporated by the princely administration into the creation of the modern water management apparatus of the capital. The paper will also look at the appropriation of these innovations by the affluent section. The pre-existing social hierarchies played a critical role in the selection of the beneficiaries of such amenities. But the conception of hygiene and sanitation during the colonial period had far-reaching consequences on urban water management and society at large. The study will also cover the transformation of the network of sacred ponds as storm water drainage system of the state with abundant monsoon-fed rainfall, simultaneously with the introduction of pipe water system in 1920s-30s. The paper will be predominantly based on primary sources in repositories such as the Kerala State Archives and the secondary sources.

### **What TMT Cannot See: Objectivity and Values in Science**

Mallory Hrehor, University of Cambridge

My objective in this paper is to analyze the current controversy of the construction of the Thirty Meter Telescope (TMT) on Mauna Kea, a sacred mountain for Native Hawaiians. Much of the controversy surrounding this issue stems from concerns about the colonialist implications of the construction of TMT on Indigenous lands, and the harm this may be doing Native Hawaiians by not allowing for their own autonomy to make decisions as to what can or cannot be constructed on their sacred lands. One area, however, that has been neglected in the research surrounding this controversy is the role that beliefs about Western science have in the prioritization of scientific knowledge (or scientific "progress") over Indigenous religious concerns. In this situation, I have found that the arguments which are presented to inform how to answer the ethical question, "should we build this telescope on this sacred mountain?" are epistemic arguments, which rely on specific conceptions of the nature of scientific knowledge. Because of this, I will

be looking at how certain perceptions of Western science can allow for the deprioritization of non-scientific knowledge and concerns (including both Indigenous and religious knowledge). I will conclude by suggesting that, in the case of the TMT controversy, the epistemic arguments which are currently used to justify the prioritization of "objective" Western scientific knowledge over "subjective" Indigenous religious knowledge systems are not based on an accurate conception of the nature of scientific knowledge. Therefore, these kinds of arguments are not enough to justify this kind of prioritization. In order to answer the ethical problem of what we should do in this case, we will have to look elsewhere and provide a different kind of justification.

### **Epistemic communities, dependences, and trust in science and religion**

Marcelo M. Braga Cabral, Unicamp/Free University of Amsterdam

In this paper, I will explore and provide clear characterizations of the concepts of epistemic community, epistemic dependence, and epistemic trust, showing their value for understanding certain fundamental epistemic dynamics that people bear with both scientific and religious communities. These concepts are key categories in contemporary social epistemology and, through them, I offer a normative theoretical framework for exploring the rationality and warrant of people's practices of trust (and distrust) in the claims and other deliverances of epistemic communities. This is significant for two main reasons. First, in our highly specialized society, the production and sharing of many epistemic goods are concentrated in the hands of communities of experts – and thus non-experts usually come to achieve these goods not by conducting a first-person inquiry, but by trusting the testimony of such communities of experts. Science is a paradigmatic instance of this phenomenon. Second and relatedly, in various religious traditions knowledge is also passed down by testimony, and members of communities are called to trust the deliverances of the epistemic authorities within their communities. Thus, both in science and in religion, practices of epistemic trust display a central role in the sharing of knowledge.

I will proceed as follows. First, after quickly surveying the literature, I will propose a conception of epistemic community [EC] centered on the notions of epistemic practice and epistemic relations. I will also advance a three-level notion of EC, each one corresponding to a certain level of membership coverage. Second, I will propose a normativity for practices of trust of ECs, defending that, for each one of the three levels of EC, certain epistemic norms are appropriate for justifying epistemic dependence. I will characterize and briefly explain these norms and how they justify epistemic dependence on ECs. Third, based on these norms, I will defend three kinds of warranted practices of epistemic trust in ECs. Finally, I will point out how these norms and practices illuminate numerous cases of people investing their trust in scientific and religious communities, giving a framework for understanding when these practices of trust are justified and when they are not.

### **How Marxism helped to hypnotize the nation. Science, ideology and scientific esotericism in (post)Soviet Ukraine**

Maria Roginska, Institute of Sociology, University of the National Education Commission in Krakow

The paper examines the interaction of science, Marxism-Leninism ideology and popular esotericism (in particular, the discourse of hypnosis) in Soviet Ukraine. The fluidity of boundaries between these three domains led, as I intend to show, to re-enchantment of materialist science in the Soviet period and its full-fledged sacralization in the post-Soviet time. The main conceptual frame that I introduce into this discussion is the imaginary understood as a complex of images and ideas expressed by images that contribute to the world picture of a society. In this paper I first reconstruct the Soviet imaginary based on the texts of Marxism-Leninism, scientific atheism, and dialectical materialism. Then I examine scientific discussions dealing with hypnosis in Soviet Ukraine to show how they fit into the same imaginary pattern. Finally, I turn to the quasi-scientific research and hypnotic practices of the later time and demonstrate how – already in the USSR, but especially after its collapse – they used the Soviet patterns to construct bricolage religious beliefs of the New Age type. Such an imaginary is still present in Ukraine, which I illustrate with excerpts from about 100 in-depth interviews, conducted by me with Ukrainian scientists about their images of the divine.

## **Science and Religion in the classroom: narratives about conflict and independence in High School textbooks**

María Sol Barbera , Universidad Austral

This study explores the representation of the relationship between Science and Religion in the Biology and History textbooks used in public and private High Schools in Argentina's capital city, Buenos Aires. We worked on materials designed for the first and second year of High School. In these courses, students are between 12 and 15 years old, a central age for the formulation of ideas about Science and Religion. The curriculum for these subjects includes, in Biology, the origin of life and the Theory of Evolution. In History, topics related to the cultural and territorial expansion of Islam, the Crusades and the Middle Ages.

In Argentina, state schools are secular. Religious education can only be provided in private institutions. To consider these differences and how they could affect the material utilized for classes, we performed a content analysis on the textbooks provided by the Ministry of Education of Buenos Aires and on the books chosen by some religious schools. To obtain the corpus of the latter, we surveyed the material used in ten private institutions and selected the three most frequent textbooks for each of the two aforementioned curricular areas. We delved into the definitions each book provides for Science and Religion, how their relationship is addressed and the way historical events relating to the main topics of this research are portrayed.

Preliminarily, mentions of the relationship between Science and Religion in the textbooks analyzed are relatively few. This analysis allows us to understand how and with what real frequency they are linked, through what concepts, in what topics of the curricula and if there are any notions of conflict, independence or other ways to understand this relationship that are expressed explicitly or implicitly within these texts.

## **Navigating the Nexus: Public Perceptions of the Science-Religion Relationship in Kenya**

Mark Okowa, Tom Mboya University

Kenya, as a country enjoys a vibrant cultural diversity and rich traditions. Amidst its varied tapestry, the interplay between science and religion forms a complex and dynamic narrative. A critically examination exploring multifaceted factors that shape public perceptions of the relationship between science and religion in Kenya is a key research area. First, influence of religious institutions in Kenya which wield significant influence in shaping public perceptions have significant influence on Health-Seeking Behaviours including individuals' decisions to seek healthcare even for life threatening illnesses. The stances adopted by religious leaders on issues related to science can sway the beliefs of their followers. The pulpit becomes a platform for disseminating views on the compatibility or conflict between scientific knowledge and religious doctrines. Secondly, government policies and educational initiatives are other key instrumental areas in shaping public perceptions. Even though government regulation on religion and belief systems in Kenya has been fiercely opposed by many religious personalities, it has been seen as necessary due to recent crimes related to religious practices and beliefs like the infamous Shakahola Massacre where hundreds of faithfuls were starved to death following religious teachings. Government policies and educational initiatives grounded on research and objectivity to cultures and traditions of the people, has the potential to promote scientific literacy and can positively impact how individuals reconcile science and religion in their personal belief systems. Lastly, socioeconomic factors also have significant influence on perceptions. Individuals facing economic challenges may prioritize immediate concerns over abstract debates about the relationship between science and religion. The complex interplay of economic circumstances, access to resources, and financial stability can significantly influence how individuals interpret and reconcile scientific knowledge with their religious beliefs. This presentation, navigates this very delicate nexus with practical examples from Kenya and East Africa in general.

## **Children in Tana Toraja Reason Consistently About Death Despite Conflicting Accounts**

Melanie Nyhof, Carthage College

In Tana Toraja, children receive conflicting information about the consequences of death. On the one hand, they have direct, prolonged exposure to corpses as non-functional, but on the other hand, they receive testimony from relatives that corpses are “ill” and need food. In the current study, we interviewed 72 children (ages 7-12, divided into two age groups: younger and older) and 31 adults in Tana Toraja to ascertain the development of reasoning about death in conditions where direct experience and testimony conflict. We presented participants with three vignettes about a person who had died in different contexts and asked about the functionality of the person’s body, mind, and soul after death. We discovered differences within age groups; for example, younger children were more likely to reason as extincivists, viewing all functioning as ceasing at death. We also found trends across age groups and contexts, for example, that the body is regarded as the least functional after death, and the soul is viewed as most functional. This study replicates and extends findings obtained in other cross-cultural research, suggesting that continuity responses increase with age and that children assume continuity of the soul in the afterlife.

### **From self-transcendence to self-enhancement: is mindfulness a religion for unbelievers?**

Miguel Farias, Coventry University

Mindfulness meditation has entered the mainstream Western culture as a secular technique that supports physical and mental health. Given this representation, mindfulness meditation is particularly appealing to unbelievers (e.g., atheists, agnostics, and nones) who desire self-transformation yet wish to keep traditional religions at arm’s length.

This paper starts by looking at the scientific literature on mindfulness which depicts how self-transcendence motives have been replaced by self-enhancement ones (e.g. self-esteem, wellbeing, self-compassion). Despite this focus on the self, mindfulness has retained a spiritual mindset, from its emphasis on achieving an experience of 'pure' or 'bare awareness' to quasi-utopian beliefs, such as how its practice can make the world a more peaceful place. The paper then examines original data from two studies (qualitative and quantitative) where we analyse the beliefs of atheists and agnostics in the powers of mindfulness. These beliefs were undergirded by a host of ideologies, epistemic claims, and metaphysical assumptions about the nature of mind, self, and reality—which are predicated by broader cultural trends such as expressive individualism, perennial philosophy, and New Age sentiments and ideals. We also found out that the greater frequency and length of mindfulness practice among these unbelievers was associated with stronger levels of spirituality.

We end by contextualising these results within a historical framework of the development of body-mind techniques for the past 100 years, whereby religious ideas and virtues have slowly morphed into psychological concepts that are accepted as scientific by the general population, including unbelievers.

### **“Against Determinism: Science and Religion in Antonio Gramsci’s Prison Notebooks and Science at the Crossroads”**

Neil Tarrant, University of Leeds

Antonio Gramsci (1891-1937) was a vehement critic of the economic determinism that characterised the political and social thought of his fellow Marxist theorist Nikolai Bukharin (1888-1938) and his acolytes. In this paper, I compare the reflections on science and religion that Gramsci made in his Prison Notebooks with those presented in *Science at the Crossroads*, a volume of essays edited by Bukharin. The latter volume, to which Gramsci had access during his incarceration, was based upon a series of papers first presented at the second international congress of the history of science held in London in 1931. Boris Hessen’s essay on the economic roots of Newton’s *Principia* is of particular importance. This paper will analyse how the two Marxist atheists understood religion’s role in establishing the conditions that made possible the emergence of modern science. It brings to the fore a fundamental tension between Hessen’s belief that economic factors determined the creation of modern science, while Gramsci emphasised the fact that religion could also play a fundamental role in determining the success or failure of scientific development within a given society.

### **Evolution Teaching, Religious Moral Values and Educational Disputes in Brazil**

Pedro Pinheiro Teixeira, Pontifical Catholic University of Rio de Janeiro

Recently, in different countries, religious moral values have been used in disputes over educational policies. In Brazil, political leaders and groups linked to conservative Christian denominations, especially evangelicals and Catholics, have gathered strong popular support for this agenda. Topics such as evolution and the origin of life are challenging for Biology teachers in this context, as some religious beliefs may conflict with scientific knowledge. Research with Brazilian students shows that fundamentalist beliefs can interfere with the acceptance of evolutionary theory, but a recent survey showed that other social factors may have greater predictive power than religion. Thus, the objective of this work is to analyze the challenges posed by this reality for Biology teachers, in the Brazilian context of the last two decades. To do this, the author carried out documentary and bibliographical research, using a database of bills presented in the Chamber of Deputies, statements by religious and political leaders, identifying different individual and collective actors in these disputes. The results indicate that there are parliamentary initiatives that seek to restrict the teaching of evolution and/or introduce the teaching of creationism, but, so far, they have not been approved. Publications and statements by some Pentecostal leaders associate evolution with a diabolical plan by scientists. Although they have not changed school curricula, these positions help to mobilize movements to attack teachers' freedom to teach. Based on previous research, it seems promising to teach evolution avoiding a direct confrontation with religious beliefs and scientism. On the other hand, it is possible that teaching evolution while being aware of possible moral conflicts could contribute to greater acceptance of evolution, which could be the target of future research.

### **Representation of Childbirth in Nigerian Yoruba Nollywood Movies**

Raheemat Adeniran, Lagos State University

Childbirth is highly revered in many African cultures. It is accompanied by varied cultural norms and beliefs often guiding pre-conception, conception, delivery, and post-delivery practices. In Nigeria, across many cultures, childbirth is considered as core essence of human existence. Cultural nuances around childbirth tend to influence story plot of many films produced in the country's movie industry popularly dubbed Nollywood. Situated within the cultural norms theory the proposed study will adopt a qualitative research approach to examine cultural representations of childbirth, from pre-conception to post-delivery, in contemporary Nigerian films. The study will be limited to movies produced in Yoruba language and approved by the country's regulatory agency, the Nigerian Films and Video Censors Board (NFVCB). Yoruba language is largely spoken by the Yoruba ethnic group, one of the three major ethnic groups in the country. The Yorubas have a rich cultural heritage, with entrenched cultural practices on issues relating to childbirth. Movies produced in Yoruba language often tend to promote the tribe's varied cultural norms, beliefs and practices. Hence, this study is expected to explore childbirth representations in Yoruba movies in contemporary Nigeria. Based on available data from NFVCB, this study will examine all Yoruba movies produced over the available nine-month period data spanning January 2022 to September 2022. The list containing 264 approved movies in 2022 serve as the population of study. The listed movies were examined for portrayals relating to childbirth with 82 movies identified as having contents relating to pregnancy and childbirth. The 82 movies will be purposively sampled and analysed for their representations of pregnancy and childbirth. Among expected portrayals of childbirth is the belief in supernatural forces influencing varied stages of the childbirth journey. The social and theoretical implications of the findings will be established in the proposed chapter.

### **Binaries, Boundaries, and Belief: The Place of Science and Religion American National Newspaper Coverage of the Culture Wars**

Rebecca Catto, Kent State University

This paper is based on analysis of articles related to science and religion from four national newspapers in the USA: The New York Times, The Washington Post, The Wall Street Journal, and USA Today. The New York Times (NYT) and Washington Post (WaPo) are considered more left-leaning national newspapers and The Wall Street Journal (WSJ) and USA Today more centrist to right-leaning. The date range was January 2021 – January 2023, yielding 1008 articles, then inductively coded in NVivo. Patterns in American public culture related to science and religion are, as to be expected, reflected in the coverage, with political polarization between Republicans and Democrats strongly salient. The culture wars are frequently

invoked. They are alive and well in contemporary American public life focused on the same social structures, institutions, and issues as Hunter found in 1991: gender; sexuality; race; class; education; the family; the courts; policy, but intensified. Science and religion play into this continuity and change. The political polarization does not map directly onto a simple secularity/religion or science/religion dichotomy. Science, expertise, and evidence are mobilized in right-wing policy arguments, as well as in critique thereof. Care is also taken to report about progressive Evangelicals and moderate Christians. The discourse is saturated with beliefs. Conflict does not equate to the conflict narrative. However, often conservative Christianity is reported as the problematic Other, restricting rights and causing harm through its political influence. How to analyze the simultaneous retrenchment and blurring of boundaries is considered.

### **Turning the Conflict Narrative on its head: an International Exploration of how Priming with the view that Science and Religion are Compatible may Influence Perception**

Rebecca Hughes, University of Birmingham

There is a prevalent view in Western society, which is also present in some Eastern societies, that science and religion are inherently in conflict, known as the conflict narrative. Psychological research around the contact hypothesis indicates that contact with outgroups can influence intergroup relations, but this is dependent upon the type of contact. It may be that priming people with specific viewpoints will also influence their perceptions in varying ways. Our previous research indicates that priming individuals with the conflict narrative can influence their views of the conflict/compatibility between science and religion compared to a more neutral prime. Following this, we investigated whether exposure to the idea that science and religion are compatible would similarly influence perceptions. We designed a study to prime participants with a "compatibility prime", in which science and religion are posited to be compatible and complementary as opposed to inherently in conflict. We are recruiting participants from 5 countries (Ntotal = 3600): UK, Germany, Argentina, Spain, and Sri Lanka, of varying religious social identities. Participants read either a neutral prime or the compatibility prime, and then answer questions about their beliefs and perceptions of the conflict/compatibility between science and religion. Data collection is currently ongoing.

### **Gerotranscendence and the secularization of society**

Renate Ysseldyk, Carleton University

Numerous large-scale surveys suggest steady generational declines in religiosity and religious social participation, with visible shifts from one cohort to the next (Idler, 2022). And yet, research considering the secularization of society has largely ignored age and ageing as important points of inquiry (Idler, 2021). Similarly, beliefs in science and religion-science compatibility have rarely been investigated from a gerontological perspective, despite the long-standing concept of gerotranscendence (Tornstam, 1997), and evidence that religious and scientific identities and belief systems need not be mutually exclusive (Sharp et al., 2022). Indeed, the increasing salience of one's own mortality may enhance religious and/or spiritual concerns among older adults, alongside practical implications of mounting biomedical needs and care considerations. Given a rapidly growing ageing population (WHO, 2022), the need for inquiry into this topic has never been greater. Thus, our guiding research question is "How do older adults understand their own (non)religious and/or spiritual identities and beliefs in science within an increasingly secular society?" More specifically, in this project, funded by an INSBS small research grant, we are examining older adults' perceptions of compatibility among their (non)religious and scientific identities and belief systems, with implications for coping with health ailments (e.g., acute, chronic, pandemic-related) and care choices (e.g., vaccinations, end-of-life care). To achieve these aims, we are currently collecting data through an online survey (current N=296), which will be followed by interviews with diverse older adults. This presentation will summarize both our quantitative and qualitative findings. In keeping with the aims of the INSBS, it is expected that our outputs will impact older adults' and community stakeholders' perceptions of the relations between (non)religion and/or spirituality and science, as well as engage with academic and societal dialogue regarding the importance of addressing older adults' life (and death) choices regarding spiritual care in health and medicine.

## **Caste as a Category in 'Science and Religion': New Sociologies of Science, Belief and Religion**

Renny Thomas, Indian Institute of Science Education and Research (IISER) Bhopal, India

In my work on science and religion in India, I argued that it is important to discuss the category of caste when we study science and religion (2020, 2021). Caste as a category is less talked about in the larger literature (both historical and sociological) on science and religion internationally. However the reality is that caste continues to be a crucial factor in science and scientific institutions, both in India and abroad. Caste based inequalities are no longer confined to India. It can be found in the US, UK and in Europe. Indeed, we can see how the concept of caste might be used to understand the experiences and histories of racial inequality in fresh new ways, as demonstrated by Isabel Wilkerson in her much talked about book, *Caste: The Origins of Our Discontents* (2020). Now that various leading American universities have included caste as a protected category in the institutional non-discrimination policies (2022, 2023), the question of caste as a category in 'Science and Religion' becomes more important when we study Indian scientists. In the Indian context, I argued that the caste practices of the dominant upper caste groups get normalised as cultural practices in science institutions. Their preferences and tastes received institutional validation and legitimacy. It is this conversion of their 'caste' as 'culture' that normalised many of their practices as cultural in the scientific institutions. I argue that caste should be considered as a category, when we study Indian scientists and beliefs everywhere. The absence of non-Brahmin, non-Hindu and non-upper caste Indian scientists in institutions and universities in the US, UK, and Europe invites our attention to rethink the homogenised reading of 'Indian Scientists' and their religiosity. Whose religion and beliefs are we studying?. By considering caste as a category in studying scientists and beliefs, we understand the differences, diversity, resistance, and new social movements.

## **Latin American youth, the future of work and career expectations in STEM and Academia: the role of attitudes towards science and religion**

Reynaldo Rivera, Universidad Austral

In an era marked by higher prevalence of social stereotypes and hate speech, recent research sheds light on the multitude of factors that dissuade certain youths, particularly women, from pursuing careers in science, technology, engineering, and mathematics (STEM). Despite a scarcity of studies on this subject, there remains a dearth of knowledge concerning the impact of Latin American youths' attitudes toward science, religion, and their career expectations, notably within STEM and academia. This study aims to address this gap by presenting the outcomes derived from a systematic literature review and a quantitative study involving 4,171 youths from 11 Latin American countries, representing the pioneering research in this domain.

It is well-established that STEM programs consistently attract fewer women and individuals from religious or minority groups. Research indicates that religiosity correlates with a decreased inclination to pursue research-oriented academic positions, likely stemming from the perceived stereotypes held by religious individuals about societal beliefs and the broader scientific culture (Sharp et al., 2022).

Recent investigations have underscored a growing skepticism and criticism toward science and technology, coupled with misinformation about employer-required skills and the nature of future jobs. These factors significantly contribute to the diminished popularity of STEM careers, particularly in developing Latin American countries.

Our findings reveal that a myriad of factors, such as social intelligence, empathy, transformational leadership, a sense of social purpose, opportunities for personal growth, the integration of personal and professional life, and an inclusive, intersectional culture, significantly influence the career choices of young people across the eleven countries surveyed.

This research contributes by providing new comparative insights into the motivating and demotivating factors that guide these students' choices toward STEM or non-STEM careers. Additionally, it addresses a pertinent issue for labor policies, management, and economics through the lens of Science and Belief in societies.

## **The idea of Life, attacks on religion and the politics of the insurgent early in the 20th century**

Robert Bud, Emeritus Keeper, The Science Museum, London



This paper is concerned with how scientists have understood Life. It argues that during the first half of the 20th century this was a profoundly religious issue. For thousands of years previously religious people and particularly Christianity had understood that there was something special about living beings. Against this view scientists who were atheists or did not believe in a personal God argued that living beings could be understood in terms of physics and chemistry. Indeed they argued that a demonstration of the materiality of life would be a weapon in the battle against religion. However this paper will suggest that theological issues cannot be considered in isolation when considering the relationship between science and religion. This paper will argue that for many biologists in Britain and France waging a reductionist campaign, the attack on religion served as an integral part of a broader insurgent culture. I shall argue moreover that the British and French were closely connected. But, in the very different context of the United States by contrast, an analogous and apparently similar campaign was instead part of a fightback against an insurgent culture.

### **Science and religion: investigating dialogues and conflicts in Brazilian curricula**

Rodrigo Cerqueira do Nascimento Borba, University of the State of Minas Gerais, Brazil

Since the origins of the Brazilian educational systems, educational policies and school curricula have been influenced by Christian values and religious interests. From 2000s onwards, these discourses were reinforced by conservative religious groups who have acted to deny scientific knowledge and persecute teachers. Therefore, secularism is an important issue for Brazilian education. . This paper aims to investigate how scientific and religious knowledges are perceived and made sense of in schools concerning the social disputes between science and religion. Based on a qualitative approach, the author wanted to understand how these socially controversial issues are addressed or silenced. To achieve this, the author analyzed textbooks, narratives of science and biology teachers and educational legislation. The results indicate that Science and Biology teachers have avoided discussing social and cultural dimensions of themes considered controversial as evolution, sex education and environmental education. Teachers also referred to Science as neutral and impartial as a way of reducing religious conflicts. Consequently, teachers have comprehended science knowledge in a non-historical and uncritical fashion. The author defends the need to consider science and religion as different human productions, which seek to explain distinct phenomena, based on thoughts and reflections anchored in different epistemologies. In conclusion, this is necessary to strengthen comprehensive, civic and critical scientific education.

### **What kind of world is it?: Primal world beliefs, religious orientation, and scientific attitudes**

Ronald Wright, Southern Nazarene University

Clifton's (2019) research delves into the exploration of how global judgments and beliefs regarding the nature of the world (i.e. dangerous/safe, beautiful/ugly, hierarchical/nonhierarchical, etc.) impact personality, political ideology, and overall well-being. These foundational beliefs are termed primal world beliefs or primals, and Clifton has identified 22 tertiary primals, three secondary primals (safe vs. dangerous, enticing vs. dull, alive vs. mechanistic), and one primary primal (good vs. bad). Given the limited existing research in this field, the current study aims to initiate an exploratory investigation into the connections between primals and factors such as religious orientation (security-focus and growth-focus), scientific and religious compatibility, belief in science, and spirituality in science. The initial hypotheses for these relationships are:

Hy1: Scientific and religious compatibility: There will be a positive relationship between explanation of origins scores and enticing and interconnected primal scores. There will be a positive relationship between human world interaction and acceptable and hierarchical primal scores.

Hy2: Belief in science: There will be an inverse relationship between belief in science scores and alive scores and a positive relationship between belief in science scores and enticing and interconnected primal scores.

Hy3: Spirituality in science: There will be a positive relationship between spirituality in science scores and enticing and alive primal scores.

Hy4: Religious orientation: There will be a positive relationship between security-focused religious orientation and hierarchical and acceptable primal scores and a positive relationship between growth-focused religious orientation and interconnected primal scores.

Participants will include undergraduate students from the Small Liberal Arts College Research Network (SLACR) with an N of over 150 anticipated. The data will be analyzed through correlation analysis, linear regression analysis, and latent profile analysis. The results will be discussed in light of the interaction between primals and religious orientation for these scientific attitudes.

### **Cultivating Islamic Selves through Science?**

Ryan Williams, University of Queensland, Australia

Social scientists studying Islam have explored Islam as a discursive tradition that Muslims actively relate to through cultivating embodied, sensorial, and affective dispositions, and this idea has stimulated ethnographic accounts of Islamic revivals in Muslim majority and minority contexts (Asad 1993, Mahmood 2003). Through interviews with Muslims in Southeast Queensland, Australia, this paper builds on this literature but suggests that, predominantly among Muslim women in a faith circle and those pursuing higher education in STEM subjects, Muslims cultivated an Islamic self-understanding, identity, and ethics through science. Rather than reinforcing dominant tropes about Islam as regressive and opposed to modernity, these findings show how Muslims drew on distinctly modern categories of science and scientific understanding that were discursively aligned and enfolded into a thick Islamic subjectivity. This paper discusses the implications of these findings for how “everyday” Muslims relate to Islam and to science as multiple discursive traditions, “regimes of truth”, and as ethical and moral assemblages (Zigon 2010). From this vantage point, religion serves not as a totalizing moral and epistemological framework but one that religious practitioners actively reflect upon alongside other contemporaneous discourses, including scientific ones. It also discusses some possible points of disjunction and friction between scientific developments and medical practices where these are seen to contradict base ontological distinctiveness of humans (related to evolutionary theory) and Qur’anic moral prescriptions around gender distinctions, suggesting that science and religion interactions are domain and topic specific. Overall, this paper offers an opportunity to reflect on the broader relationships, between modernity, tradition, and Islamic revivalism, while serving the interests of the wider social scientific study of science and religion by moving beyond simple science/secularity and religion/anti-science binaries to engage in the lived practices and embodied cognitions of religious practitioners who engage with scientific ideas.

### **Science and Orthodox Christianity: Perceptions of Their Relationship in Greek Orthodox Christian Journals (1980–2010)**

Sandy Sakorrafou, NHFR, Greece

Since the “complexity thesis” was introduced in the 1990s, any attempt to elucidate the diverse interactions between science and religion must consider not only the historical nature of the concept of science but also the absence of a universal meaning for the term “religion.” Consequently, the focus shifts to the investigation of specific religions, delving into their heterogeneous and historically specific elements. Even Christianity, within this framework, cannot be studied as a singular phenomenon. Within this intricate landscape, this paper highlights the science and Orthodox Christianity relationship in Greece. It is argued that a diverse group of actors interested in theology – theologian academics, clergymen, teachers of theology in secondary education, and natural scientists – share a stereotypical comprehension of what science is and what it is not. Under the umbrella of the common concept of “true science,” they articulate the relationship between science and Orthodox Christianity into two mid-scale patterns, the “complementarity schema” and the “synthesis schema” which emerge within the pages of representative Greek Orthodox Christian journals from 1980 to 2010. These schemas should not be understood as general conceptual constructions, but rather as mid-scale descriptions of the science-Orthodoxy relationship imposed by the aforementioned actors in a certain space and time. These schemas are observable, not generalizable, interpretative frameworks through which the actors assess how science and Orthodox Christianity interact.

### **Unani medical system and its association with religion in Deccan 19th century India**

Sai Krishna Vardhaman, Indian Institute Of Technology Madras (IIT MADRAS)

The origin of Unani goes back to the period of Tibb scholars and Greek philosophers. It was developed during the Abbasid period. It was introduced in India during the 10th century A.D., received patronage from the Muslim rulers, and became part of the medical systems in India.

The encounter with British rule in the 19th and 20th centuries marked a pivotal moment as Unani and English medicine coexisted, reflecting distinct cultural norms. Unlike the notion of British colonialism solely dominating Indian medical practices, Unani practitioners strategically navigated the colonial context, incorporating new knowledge communities and positioning Unani as an indigenous medicine open to innovation.

The colonial era brought about significant changes in the Unani tradition. The rise of printing facilitated the diversification of Unani, with vernacular languages challenging the dominance of Persian and Arabic. Ordinary individuals, not limited to elite Mughal families, contributed to Unani's evolution by emphasizing religious beliefs in Urdu-language texts, shifting focus from Greek philosophy to diverse Muslim healing practices.

This "religious turn" faced resistance within the Unani tradition, as custodians of scientific Galenic and Aristotelian wisdom sought to professionalize and institutionalize Unani. The colonial administration, advocating for medical modernity, supported this drive, but Unani's interpretation of medical modernity differed. It aimed to remove religious elements, restoring control to traditional Hakim families. Consequently, Unani's institutionalization and professionalization reinforced the authority of these families over the knowledge system.

This paper mainly focuses on the 19th-century Deccan region of India. It challenges the idea of the association of Unani with Islam, highlighting its diverse practitioners, including Hindus and Sikhs, and the availability of medical literature in various Indian languages. This underscores the exchange between regions and the adaptability of Unani across different medical frameworks, revealing that concepts of medical modernity and professionalization are context-specific and not universally Euro-centric.

### **Negotiating Science and Religion: Contemporary Contestations between New Atheists and their Religious Critics in Kerala, South India**

Santhosh R and Navaneeth H, Indian Institute of Technology Madras India

This paper analyses the recent contestations invoking various interpretations and expositions of science between a popular New Atheist organization and a group of Muslim believers in Kerala, South India. While the earlier rationalist movements in Kerala had strong social justice commitments, the new wave of the atheist movement emerged in the state since the last decade, spearheaded by rationalist groups like EsSENSE GLOBAL, has couched on a form of scientism that espoused an aggressive stance toward religion, especially Islam, and its values, worldview, and morality. However, this new wave of atheism has recently met with an equally aggressive counter-attack from new religious groups, especially from educated Muslim youth. One such prominent collective, Unmasking Anomalies (formerly Unmasking Atheism), systematically engages with New Atheists making use of the rhetoric of 'science' and 'logic' to criticize the scientism of New Atheism and its liberal ideologies to defend religious values and morals. Critically exploring the invocation of science in public articulations of these two groups, this paper looks into the ways in which the relationship between science and religion is conceptualized and articulated in society. Based on data collected through in-depth interviews with the office-bearers and activists of these groups as well as through the systematic mapping of the lectures, talks, discussions, and other contents on their social media platforms, the paper analyses and compares the different ways in which the categories of 'science' and 'religion' are employed in three key areas of contemporary contestations between New Atheists and their religious critics in Kerala: the scientificity of religion (and atheism), morality and science, and issues of gender and sexuality. This discussion will reveal how the category of science has been understood and used in relation to the frameworks for knowledge production, morality, societal solidarity, and progress by the members of New Atheism and the Muslim religious groups in contemporary Kerala.

### **Harmony Unveiled: Navigating the Interplay of Science and Religion in Epigenetic Narratives**

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This article introduces the concept of “epigenomic narratives” as a framework to explore how scientists engage with the intersections of environmental epigenetics, health disparities, and social justice. The study is grounded in a comprehensive examination of epigenetic knowledge production and dissemination across laboratories and communities in India over the past two decades. Drawing on insights from sociology of religion and science studies, the paper delves into the religious, gender, and epistemic implications embedded in these narratives.

These narratives illustrate how scientists position epigenetics as a tool for providing biological evidence of social harms and redistributing responsibilities from individuals to broader societal structures. However, they also shed light on the limitations of epigenetic methods in effectively capturing and addressing the lived experiences of oppression. Despite scientists envisioning epigenetics as a catalyst for social change, this vision often carries a bias towards biological modes of understanding. The authors stress the need for initiatives leveraging epigenetic knowledge for social justice to prioritize the insights and experiences of marginalized communities, while also acknowledging and addressing the influence of religion on scientific perspectives and societal implications.

The article further explores how epigenetic findings, emphasizing the consideration of biological life within environmental contexts, including religious beliefs, challenge the conventional notion of a “conflict thesis” between science and religion. It posits that public and scientific perspectives are dynamic and heavily influenced by national context. The authors advocate for an intersectional approach, urging increased collaboration between scholars specializing in public understanding of science and sociologists studying science and religion. They contend that a comprehensive understanding of attitudes toward science and religion requires empirical and theoretical work on an international scale, extending beyond the assumption of an inherent conflict and focusing on aspects of identity, culture, and power relations.

### **The other side of the coin: Theologians, psychologists, and collaboration**

Shoko Watanabe, University of Birmingham

The fields of psychology and theology often overlap in their focus—many of the issues investigated in one of these fields (e.g., morality/ethics/prosocial behavior) have clear connections with the other. While there is great potential, however, there is little cross-fertilization between these fields of study. One potential reason for this lack of engagement may be due to biases and stereotypes that psychologists may hold against studies of religion. For example, social/personality psychologists tend to evaluate research on religion as less intellectually rigorous compared to other subfields of psychology (Rios & Ross, 2020). Independent of such views (or perhaps because of them), theologians may also be reluctant to engage with psychological science. To bring these two disciplines together, understanding the “theology” side of this issue is crucial. However, to our knowledge, there is no published empirical research investigating how theologians perceive psychology/psychologists. Our research fills in this gap. Using a large-scale online survey administered in English in multiple countries, we explored what specific hesitations, if any, theologians might hold about engaging with psychological science and whether such concerns were specific to psychology (vs. applying generally toward social sciences). Although the research questions examined in the current study were exploratory, we tentatively hypothesized that theologians would be less willing to collaborate with psychologists relative to social scientists of a different discipline (sociology) and that other important attributes (e.g., competence, objectivity, trust) would be rated lower for psychologists. Similarly, we also tentatively hypothesized that meta-perceptions regarding psychologists—in this case, theologians’ perceptions about how psychologists view theology—would be less positive compared to what theologians believe sociologists think about theology. Data collection is ongoing at the time of writing this abstract; when completed, the data will be examined by following our pre-registered analytical plans. Results will be discussed along with implications for enhancing our understanding of the benefits and challenges of cross-disciplinary endeavors to study religion and science.

### **Rise of Populism, Retreat of Reason and Increasing Religiosity in Post-globalization Sri Lanka**

Siri Hettige, University of Colombo

Sri Lanka's changing, multi-religious landscape has been the focus of research undertaken by many Anthropologists (cf. Whitaker, et al eds. (2022)). While the changes over time has been the result of many endogenous and exogenous influences extending over many centuries, post-colonial society of Sri Lanka at the time of independence in 1948 also displayed the highly significant impact of the country's encounter with western colonialism on its economic, social, cultural and political landscape. In fact, Sri Lanka at the time was already a highly differentiated, multi-religious society.

The emergence of a democratic state with many secular features towards the end of the colonial rule, spread of modern education, rise of many political parties including those with an explicitly secular socio-cultural agenda and the proliferation of modern professions including scientific ones began to influence public discourses on important economic, social, cultural and political issues. Yet, the direction of change has not been a 'one-way street' as diverse counter-currents like increasing religiosity and religious identity, political populism and retreat of reason (Persson, 2008), began to influence public discourses, even shaping public policies in such areas as education and health. In the above regard, a highly significant development in recent decades is the spread of STEMM education under the influence of economic liberalization and the corresponding devaluation of the Arts stream in both general and higher education. However, its reach has been limited due to the prevailing structural inequities within the education system, and a majority of students have had no access to the science stream. So, what we witness in more recent years is both a reversal of some of the earlier trends and the continuity of others.

This paper is intended to capture the above developments which, in fact are not in line with many aspects of the rationally oriented, modernist social and economic development programs implemented under the guidance of state institutions in such fields as scientific and industrial research, science education, medical research and general and higher education. This has significant implications for the complex relationship between science and religion. The analysis and conclusions are based on qualitative data gathered as part of Science and Religion Exploring the Spectrum research undertaken in Sri Lanka.

### **Beyond the horizon: The limits and social functions of the myth of conflict between science and religion**

Stephen Jones, Keele University

Recent research into public discourses about and perceptions of science and religion have characterised the narrative of conflict between science and religion is a distinctively Western mythology. Starting from this point, this article asks two related questions. Firstly, if the narrative of transhistorical conflict between science and religion is a myth, what social functions does it perform, and for whom? Secondly, if it is Western, how do we account for the fact that the West is a formation that is internally variegated and that has blurred external boundaries? We pursue these questions by presenting an overview of findings from a qualitative sociological study involving 300 interviews on perceptions of science, religion and evolution carried out in Argentina, Australia, Germany, Spain and Sri Lanka, in turn building on 120 interviews from an earlier study focusing on the UK and Canada. What brings these five contexts together is that in each of them there is very little active public conflict between scientific and religious authorities about evolution, and that science and religion are not prominent points of public debate. We still find, however, that the narrative has influence. In some states, the conflict narrative has social force in some social domains but not in others. In many of our countries, the narrative furnishes an increasingly prominent nonreligious identity. Further, we find that in Western(ised) contexts the narrative of conflict operates as what Charles Taylor calls a 'horizon of understanding', a framework for comprehending the world. Even events that are not directly related to either science or religion are perceived and comprehended in terms of the conflict narrative. The conflict narrative is, we therefore conclude, a reservoir of cultural resources that can remain latent for long periods and also be activated to different ends in different social contexts.

### **A theological inquiry into trust in science: exploring bridges and internal resources**

Tiago de Melo Novais, UMESP/Yale

Continuous scientific progress and technological achievements have significantly shaped the modern world, from innovations in health treatments and medicines to the creation of highly effective communication technologies. While these advances have undeniably improved the quality of life for societies across the globe, a crisis of plausibility has emerged in societal trust towards science and scientists. Notably, religious communities, as in the case of certain Christian communities in the United States and Brazil, have recently displayed substantial lack of trust in science, manifested in movements challenging the efficacy of vaccines, denying global warming, and even endorsing ludicrous conspiracy theories like the flat earth. In all these cases, the distrust is directed not against fringe or emerging scientific hypotheses, but to well-established scientific theories, as in the classic case of creationism and evolution denial. This article aims at addressing this issue from a specific theological and religious studies perspective, answering the following guiding question: What elements within the religious tradition of Christianity have the potential to contribute to mitigating the current problem of distrust in science? Adopting an exploratory approach grounded in existing literature, I will focus on two internal resources that can serve as bridges to strengthen the trustworthiness of science: faith-as-trust and community-based knowledge. I will, thus, divide this paper into two sections. First, I will explore a theological notion of trust as the fundamental component of the relationship between God and religious individuals. Unlike mere belief, monotheistic traditions affirm that trust in God is a sui generis type of trust, theologically called faith, that unites human beings to God and, in turn, unites human beings into belief-based communities. This religious notion of trust may serve as a potential candidate for fostering meaningful dialogue between scientific authorities and religious individuals, as it presupposes that faith is, in an important sense, the trust that makes reliable interpersonal and community relationships possible. Second, I will argue that, in the Judeo-Christian tradition, trust is also based on community knowledge. In contemporary terms, this represents the religious approach to nurturing community through the ongoing sharing of knowledge about spiritual practices and stories that give meaning to life. Similarly, the scientific community relies on its own knowledge-sharing practices to nurture scientists and promote human knowledge. This notion, therefore, can serve as another bridge between religious and scientific communities, by promoting the same emphasis on trust through community-based knowledge. While the former is about faith-as-trust that generates communities, the latter is about trust in community knowledge. From these two internal resources of religion, I hope to offer insights that can inform strategies for rebuilding social trust in science.

### **Trust/Distrust in science among evangelicals in Brazil**

Tiago V. Garros, Brazilian Association of Christians in Science

Drawing from the seed grant and small grant our research group has secured with INSBS, this paper will present the results and discussion of an analysis of our research database that hasn't been performed yet and is very promising. Our research projects have tackled the question "how is trust/distrust in science (TiS) associated with religiosity, educational background, and intellectual character?". Our objective was to find consistent and comprehensive correspondences between sets of people (Thiem et al., 2016). More specifically, for a given set of people who (dis)trust in science, we wanted to know which would be the most parsimonious way(s) to describe that same set of people in terms of their religious, educational and intellectual profile, intersecting as well with their political views and other demographic aspects. The results were surprising: we found that the set of people who, according to the scales we used, tend to trust in science, are the same people who fall towards the left on the political spectrum. And the people who fall towards the right tend to exhibit distrust in science. These results apply to the full sample of respondents to our questionnaire (n= 973), but what happens when we segment our sample and consider only the evangelical Christians, who have been known in Brazil to massively support anti-science stances during the pandemic (anti-vaccine movement, no mask calls from religious leaders, no lockdown, etc.) following their support for Jair Bolsonaro's denialist positions? Does the tendency of political inclination as a trustworthy predictor of trust/distrust still remain within this demographic (according to the models we applied our statistical analysis)? We will also analyze a subgroup of this demographic - which are the people who know or are engaged with ABC2. This organization has been working with evangelicals for over 7 years promoting initiatives of scientific literacy, appreciation and education, so we would expect that people involved with it would fall more towards the "trust in science" end of the spectrum, with politics being an irrelevant aspect for this inclination. But is this the case for this subgroup? In conclusion, we will suggest epistemic mechanisms that might be in place that can explain these results in order to be able to transfer the insights of this particular research to other realities across the globe.

## **How (not to) build a discipline around the Social Study of Science and Religion**

Thoko Kamwendo, Durham University

In this paper, I develop a case for (not) building a discipline around the Social Study of Science and Religion. Drawing on lessons from Religious Studies, STS and Behavioural Economics, I argue that we should not strive to build a discipline in its traditional form, but that for practical reasons we should nevertheless coalesce around a 'field' with a degree of institutionalisation.

I argue that we should maintain the interdisciplinary character of the field but keep revisiting and spelling out the theoretical assumptions embedded in our approaches. We should think carefully about how we name the field, and we should continue our trajectory to move beyond debunking into creative scholarship and forms of application including, but not limited to, key areas of policy.

## **Exploring Conflict Ascription in Science and Religion Discourse: A German Perspective**

Tom Kaden, University of Bayreuth

This conference paper presents findings from a study investigating the phenomenon of conflict ascription in discussions surrounding science and religion in Germany. Drawing on data gathered from 64 semi-structured interviews, the prevailing perspective among participants suggests a perceived absence of inherent conflict, particularly in relation to the contentious topic of evolution. This perspective, however, aligns with a relatively low awareness of the issue within Germany. Irrespective of individual worldviews or familiarity with science and religion-related topics, participants frequently attribute conflict positions to others. This ascription is primarily linked to "epistemological conflict" regarding truth claims. The study delves into instances of conflict ascription, exploring its associations with the Covid-19 pandemic and participants' perceptions of the situation in the United States.

The findings reveal that individuals often conceptualize science and religion as distinct domains for themselves but not for others, highlighting a perceived epistemic divide. Furthermore, the research underscores the absence of moral and ethical considerations in these discussions, attributing them to the political sphere. This investigation illuminates the impact of Germany's secularized society on shaping the dynamics of science and religion discourse within the country.

## **Indigenous Student mental health services, and Sangomas in South Africa universities**

Umoh Adetola Elizabeth, University of Kwazulu-Natal

Indigenous healing is prevalent in African communities and Sangomas play an essential role in many African cultures, serving as custodians of their communities and being consulted by villagers to heal the sick, communicate with ancestors, and protect villages from harm. Sangomas are legally recognized under the Traditional Health Practitioners Act of 2007 alongside herbalists, traditional birth attendants, and traditional surgeons. University students are not immune from visiting and consulting Sangoma for diverse ailments and diseases. Students travel from their universities and suspend lectures to go home for Sangoma consultation without the knowledge of the institution for consultation. Given this background, the paper discusses university students' utilization of traditional healers in

tackling mental health and the dynamics of the healing process. As well as university's role in providing in-house university Sangoma for students mental wellbeing. Methodologically cross-sectional surveys of students, interviews [university staff], focus groups, oral history, and documentary sources were conducted. Findings suggest that religious beliefs triggered students' visitation to Sangoma. This alludes to students' identity issues due to the need to know their biological fathers, and the perception of diseases caused by ancestral spirits. Students are diagnosed, counseled in their native language, and receive healing for physical and mental illnesses through divination.

## **Epistemology of African Religion and Mental Health in South Africa**

Uwem Samuel, University of Kwazulu-natal

In many African countries, health treatment utilizing indigenous and religious systems is prevalent, which coexisted across Africa, including South Africa. Given this, the paper examines a case study of South Africa's epistemological foundations on healing methods of the 'mentally unwell' and the role of traditional healers in mental health in South Africa. It explores how belief systems influence mental health care in South Africa and spiritual healing dynamics of certain commonly used plants in South African traditional medicine for spiritual healing. The paper is underpinned by William Alston's non-essentialist notion of 'religion-making to unpack belief in supernatural beings; a difference between sacred and profane objects; ritual acts; a moral code; religious feelings; prayer or other forms of communication with the gods.

Methodologically cross-sectional household surveys at the community scale, interviews, focus groups, oral history, archival and documentary sources were conducted. The paper argues that religious practice is a component of contemporary medical care in South Africa because religion is regarded as central to sense-making for many people living with mental health illnesses because of spiritual components, including soothsaying, incantation, traditional herbs, or prayers.

The paper argues that African traditional medicine and healing methods have their roots in African religious beliefs because of the belief that such methods treat illnesses holistically rather than only treating symptoms. Spirituality and religion are significant social factors in mental health care in South Africa.

Spirituality and religion are significant social elements that impact health care. As the first line of treatment, Traditional Health Practitioners (THPs) are frequently contacted for both spiritual and physical problems.

### **Extra, Extra: Read all about it! An Analysis of Science and Religion Articles In Ghanaian Print Media**

Vivian Dzokoto; Adote Anum; De-Graft Nana Agyei; Ernest Ayum Nartey; Nicolas Fergusson Russel; Ishmael Osei Yaw Frimpong, Virginia Commonwealth University; University of Ghana; University of Ghana; University of Cape Coast; University of Cape Coast; Oxford University

Despite the growing influence of social media, print media remains an important source of public education, information dissemination, and reflection of public discourse in many low- and middle-income countries. Analyzing newspaper reporting trends enables the identification of patterns, biases, and shifts in narrative, contributing to media literacy, informed civic discourse, and a deeper comprehension of societal attitudes and values. In this study, we analyzed five prominent Ghanaian newspapers over a 13 year span for content on science and religion. We found that science articles focused primarily on applied science, with climate concerns, nutrition, and physical health featuring prominently. Religious news stories in the dataset predominantly centered on unity, faith, societal dynamics, moral conduct, and specific doctrinal issues. Collectively, our content analysis over time provides insight into commonly represented science and religion topics in Ghanaian print media, as well as those that are overrepresented and excluded. We also investigated preferred and under-utilized communicative formats (article types) in the print discourse of science and religion information in Ghana. Collectively, our findings suggest that while Ghanaian newspapers may do a great job of disseminating information on a subset of topics, they may benefit from taking advantage of a growing opportunity to engage with the public on a much broader and more contemporary range of scientific and religious issues.

### **From Science and Humanism to Science as Religion: the emerging representation of science as a worldview in BBC blue-chip documentaries**

Will Mason-Wilkes, University of Birmingham

This presentation summarises a chapter in *Most Adaptable to Change: Evolution and Religion in Global Popular Media*, currently in press with Pittsburgh University Press, co edited by the chapter authors. In the chapter, we trace historical developments in the representation of science and non-religion in BBC 'blue-chip' television science documentaries, focusing on two high-budget and high-prestige programmes,



Jacob Bronowski's *Ascent of Man* and Brian Cox's *Wonders* series of programmes (released in the early 1970s and 2010s respectively). Through close analysis of the language, imagery and soundscapes in these programmes, we identify a shift from an explicit positioning of science as relating to and underpinning a philosophical humanism which is evident in the *Ascent of Man* (e.g. as identified in Hall 2019), to an implicit representation of science as being the grounds for a similar totalising worldview but without direct reference to humanism, evident in *Wonders of Life* (and described in Mason-Wilkes (2020) as a 'religious' representation of science). We detail how evolutionary narratives specifically are enrolled in these representational forms, in the work of Bronowski as aligning with and justifying a humanist perspective, and in the later work of Cox as providing the material from which a grand narrative of creation built purely from 'scientific' knowledge can be fashioned. We discuss this representational shift in the context of a changing media and cultural landscape, specifically; developments in viewing technologies; institutional and production process changes at the BBC and a perceived divergence in prominence and cultural authority or caché of science and religion in British society over the latter decades of the 20th century and the first decade of the 21st.

### **De-Orientalizing Discourses: Co-operation, Engagement, and Connections in the History of Science**

Zaheeda P. Alibhai, University of Ottawa

Samuel Huntington (1996) has argued, that a new phase in world politics will be the advent of "cultural conflicts" along the lines of civilizational difference, what Huntington refers to as "civilization identity," between seven or eight major civilizations. Therein, according to Huntington, lies the new battle lines—the fault lines between civilizations. Particularly troubling, Huntington concludes with a warning that the "clash" will be between primarily two —Islam and the West. Critiquing Huntington's simplistic theory Edward Said (2001) countered that the danger does not lie in clashes between civilizations but in the assumption that civilizations and identities are "shut-down, sealed-off entities" that have been purged of their "internal dynamics and plurality" and "the myriad currents and countercurrents that animate human history." For Said (2001), the clash lies in ignorance of the "less visible history" between "Islam" and "the West," one of "exchange, cross-fertilization and sharing." The rejection of the "clash of civilizations" and in favour of the "clash of ignorance" is argued by the Aga Khan (2002) who furthered that the fault line between Islam and the West is not characterized by fortified boundaries or civilizational enmity but by gaps of knowledge from both sides that neglect the "long history of respect and cooperation" between both civilizations (2006). Nowhere does this relationship of exchange and co-operation become more visible than in the history of science. For instance, the 9th century Graeco-Arabic translation movement in Baghdad provides a very early example of the "dialogue of civilizations" (Bala 2008) where diverse ideas from different languages, epistemologies, religions, cultures and worldviews were made compatible with one another. This paper explores the cross-cultural history of science to illustrate the "less visible" relationship between "Islam" and the "West." I argue that, a re-examination of these relationships in the co-creation of science can become a site where we can observe a deeper cosmopolitan pluralism and see more clearly the way that clashes between civilizations can be transgressed, destabilized, and bridged to imagine a new social, cultural and political world 'in the making.' How can the history of science influence public perception of belief, non-belief, religion, and culture to become a driver for inclusion and living peacefully together? In light of contemporary challenges, I conclude that the history of science can provide the pathway towards fostering deeper insights and understanding of the past that can offer new opportunities in the present to tell a new but old story of cultural engagement, relationships, and connections between civilizations that transform "old ideas" into "big ideas" towards new revolutionary pathways of knowledge production.