

### SCHOOL OF ANTHROPOLOGY AND MUSEUM ETHNOGRAPHY

Job title	Postdoctoral Researcher "Cognitive and Cultural Foundations of Religion and Morality"
Division	Social Sciences
Department	School of Anthropology and Museum Ethnography
Location	Banbury Road, Oxford
Grade and salary	Grade 7: £31,604 to £38,833 per annum
Hours	Full time
Contract type	Fixed-term until 31 January 2020
Reporting to	Professor Harvey Whitehouse (University of Oxford) and Dr Jonathan Jong (Coventry University)
Additional information	1 post available

Research topic	Cognitive and Cultural Foundations of Religion and Morality
Principal Investigator / supervisor	Professor Harvey Whitehouse and Dr Jonathan Jong
Funding partner	The funds supporting this research project are provided by the Templeton World Charity Foundation (TWCF)

## The role

This post has been created as part of an international project entitled "Cognitive and Cultural Foundations of Religion and Morality", based at the Institute for Cognitive and Evolutionary Anthropology, within the School of Anthropology and Museum Ethnography at the University of Oxford. Funded by the Templeton World Charity Foundation and led by Professor Harvey Whitehouse and Dr Jonathan Jong, this project aims to investigate the ways in which moral and religious beliefs have co-evolved around the world, both in terms of biological and cultural evolution.

The project consists of a series of lab- and field experiments on the ways in which basic cognitive mechanisms interact with cultural environments to produce moral and religious beliefs.









The Postdoctoral Researcher will be involved in the design and implementation of cross-cultural experiments, in collaboration with the Project Leaders, other postdoctoral researchers, and external collaborators.

The Cognitive and Cultural Foundations of Religion and Morality project is funded for three years. This position is funded until 31<sup>st</sup> January 2020.

# Responsibilities

- Design cross-cultural experiments in collaboration with Project Leaders, other postdoctoral researchers, and external collaborators. Initial studies have already been designed (as described in Appendix B). Postdoc will be expected to work on some existing studies already designed and underway.
- 2. Assist Project Leaders in the implementation of cross-cultural experiments. This may involve the identification of appropriate field sites, adaptation of experimental protocols for multiple sites, and data collection in the lab and field, assisted by other postdoctoral researchers and research assistants. Note that successful fulfilment of these responsibilities will involve extensive travelling for field work.
- Assist Project Leaders and relevant project staff in relation to all administrative aspects of psychological research, including ethical approval, participant recruitment, and research assistant training.
- 4. Contribute to data analysis, manuscript preparation, submission, and revision.
- 5. Contribute to the writing of additional grant applications as required.
- 6. Present lectures and seminars as required.

## **Selection criteria**

- 1. Have completed or in the final stages toward a PhD in Social Psychology, Experimental Psychology, Cross Cultural Psychology, Cognitive Anthropology, or a related discipline.
- 2. Substantial experience in designing and conducting lab and/or field psychology experiments
- 3. Ability to travel for substantial periods of time for fieldwork.
- 4. Demonstrable quantitative statistical skills.
- 5. Ability to independently conduct statistical analyses using SPSS, AMOS, MPlus, and/or R.
- 6. Ability to work flexibly and supportively as part of a highly international interdisciplinary team.
- 7. Ability to travel for meetings, conferences, and to conduct field experiments.
- 8. Fluency in written and spoken English.
- 9. Demonstrable organizational skills.

## **Desirable selection criteria**

- 1. Access to multiple field sites and to non-Western and/or non-Abrahamic samples.
- 2. Demonstrable familiarity with the literature on Moral Foundations Theory (and other theoretical perspectives on moral foundations or basic values) and the Cognitive Science of Religion (and other psychological approaches to religion), and also cross-cultural psychology and cognitive anthropology more generally.
- 3. Ability to code in JavaScript, Python and/or R.

- 4. Ability to conduce multi-level models, structural equation models, and exploratory factor analysis.
- 5. Familiarity with Qualtrics data collection platform.

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Welcome to the University of Oxford. We aim to lead the world in research and education for the benefit of society both in the UK and globally. Oxford's researchers engage with academic, commercial and cultural partners across the world to stimulate high-quality research and enable innovation through a broad range of social, policy and economic impacts.

We believe our strengths lie both in empowering individuals and teams to address fundamental questions of global significance, while providing all our staff with a welcoming and inclusive workplace that enables everyone to develop and do their best work. Recognising that diversity is our strength, vital for innovation and creativity, we aspire to build a truly diverse community which values and respects every individual's unique contribution.

While we have long traditions of scholarship, we are also forward-looking, creative and cuttingedge. Oxford is one of Europe's most entrepreneurial universities. Income from external research contracts in 2014/15 exceeded £522.9m and we rank first in the UK for university spinouts, with more than 130 companies created to date. We are also recognised as leaders in support for social enterprise.

Join us and you will find a unique, democratic and international community, a great range of staff benefits and access to a vibrant array of cultural activities in the beautiful city of Oxford.

For more information please visit www.ox.ac.uk/about/organisation

## School of Anthropology and Museum Ethnography

SAME is renowned for its contributions to anthropological theory, its commitment to long-term ethnographic fieldwork, and its association with the Pitt Rivers Museum and the anthropology of visual and material culture. It has also become known as a centre for medical and ecological anthropology, migration studies, evolutionary anthropology, cognition and culture, and science and technology studies.

Home to over sixty members of academic staff and researchers, over a hundred doctoral students, nine Master's programmes, and two undergraduate degrees, Oxford anthropology is one of the world's largest and most exciting centres for teaching and research in the discipline.

The School brings together a number of institutes including the <u>Institute of Human</u> <u>Sciences</u> (IHS), home to our undergraduate programme. The <u>Institute of Social and Cultural</u> <u>Anthropology</u> (ISCA) is a world-leading centre for anthropological teaching and research. The <u>Centre on Migration</u>, <u>Policy and Society</u> (COMPAS) provides a strategic, integrated research approach to understanding contemporary and future migration dynamics in the UK and EU. The <u>Institute of Cognitive and Evolutionary Anthropology</u> (ICEA) investigates the evolution of human behaviour drawing on a diverse range of approaches, including biology, primatology, palaeoanthropology, cultural evolution, and psychology. ICEA includes the <u>Centre</u> for Anthropology and <u>Mind</u> (CAM). The <u>Institute for Science</u>, <u>Innovation and Society</u> (InSIS) researches and informs the key processes of social and technological innovation that are critical to business, governments and civil society in the 21st century and beyond.

The School strives for a culture that is transparent, inclusive and supportive for all its staff and students. We have achieved Bronze Level Athena SWAN accreditation and we are committed to supporting all staff who wish to undertake a rewarding career whilst maintaining a balance with their home and family lives.

More information about the School can be found at www.anthro.ox.ac.uk.

## **Social Sciences Division**

The Social Sciences Division is a world-leading centre of research and education in the social sciences. The social sciences at Oxford are distinctive for both their depth and breadth, with activity spanning fourteen departments and faculties and one cross-divisional unit. Interdisciplinary links within and beyond the university are strong, extending to the humanities, natural sciences, and medical sciences.

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For more information please visit: <u>http://www.socsci.ox.ac.uk/</u>

### How to apply

Before submitting an application, you may find it helpful to read the 'Tips on applying for a job at the University of Oxford' document, at <u>www.ox.ac.uk/about/jobs/</u>.

If you would like to apply, click on the **Apply Now** button on the 'Job Details' page and follow the on-screen instructions to register as a new user or log-in if you have applied previously. Please provide details of two referees and indicate whether we can contact them now.

You will also be asked to upload a CV and a supporting statement. The supporting statement must explain how you meet each of the selection criteria for the post using examples of your skills and experience. This may include experience gained in employment, education, or during career breaks (such as time out to care for dependants).

The supporting statement should also contain:

- 1. A brief research proposal on the topic "Cognitive and Cultural Foundations of Religion and Morality", max. 500 words, based on the attached Executive Summary (Appendix A). Your research proposal should list *three* potential experiments to be run as part of this project.
- 2. A proposal for appropriate field sites outsides of Western and/or Abrahamic contexts, including plans to gain access to said field sites.

3. Evidence of affiliation and access to psychological research facilities outside the US/UK, and/or plans to obtain said access.

Your application will be judged solely on the basis of how you demonstrate that that you meet the selection criteria outlined above.

Please save all uploaded documents to show your name and the document type.

All applications must be received by **midday** on the closing date stated in the online advertisement.

#### Information for priority candidates

A priority candidate is a University employee who is seeking redeployment because they have been advised that they are at risk of redundancy, or on grounds of ill-health/disability. Priority candidates are issued with a redeployment letter by their employing departments.

If you are a priority candidate, please ensure that you attach your redeployment letter to your application (or email it to the contact address on the advert if the application form used for the vacancy does not allow attachments)

Should you experience any difficulties using the online application system, please email <u>recruitment.support@admin.ox.ac.uk</u>. Further help and support is available from <u>www.ox.ac.uk/about\_the\_university/jobs/support/</u>. To return to the online application at any stage, please go to: <u>www.recruit.ox.ac.uk</u>.

Please note that you will be notified of the progress of your application by automatic emails from our e-recruitment system. **Please check your spam/junk mail** regularly to ensure that you receive all emails.

### Important information for candidates

#### Pre-employment screening

Please note that the appointment of the successful candidate will be subject to standard preemployment screening, as applicable to the post. This will include right-to-work, proof of identity and references. We advise all applicants to read the candidate notes on the University's preemployment screening procedures, found at:

www.ox.ac.uk/about/jobs/preemploymentscreening/.

#### The University's policy on retirement

The University operates an Employer Justified Retirement Age (EJRA) for all academic posts and some academic-related posts. From 1 October 2017, the University has adopted an EJRA of 30 September before the 69th birthday for all academic and academic-related staff in posts at grade 8 and above. The justification for this is explained at: www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/.

For existing employees, any employment beyond the retirement age is subject to approval through the procedures: <a href="http://www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/">www.admin.ox.ac.uk/personnel/end/retirement/acrelretire8+/</a>.

From 1 October 2017, there is no normal or fixed age at which staff in posts at grades 1–7 have to retire. Staff at these grades may elect to retire in accordance with the rules of the applicable pension scheme, as may be amended from time to time.

### **Equality of Opportunity**

Entry into employment with the University and progression within employment will be determined only by personal merit and the application of criteria which are related to the duties of each particular post and the relevant salary structure. In all cases, ability to perform the job will be the primary consideration. No applicant or member of staff shall be discriminated against because of age, disability, gender reassignment, marriage or civil partnership, pregnancy or maternity, race, religion or belief, sex, or sexual orientation.

## Benefits of working at the University

#### Training and Development

A range of training and development opportunities are available at the University. Further details can be found at <a href="http://www.ox.ac.uk/staff/working\_at\_oxford/training\_development/index.html">www.ox.ac.uk/staff/working\_at\_oxford/training\_development/index.html</a>.

#### For research staff only: Support for Research Staff

There is a particularly wide range of support for career development for research staff. Please visit: <a href="http://www.ox.ac.uk/research/support-researchers">www.ox.ac.uk/research/support-researchers</a> to find out more.

#### Pensions

The University offers generous occupational pension schemes for eligible staff members. Further details can be found at <a href="https://www.admin.ox.ac.uk/finance/epp/pensions/pensionspolicy/">www.admin.ox.ac.uk/finance/epp/pensions/pensionspolicy/</a>.

#### **Information for international staff** (or those relocating from another part of the UK)

A wealth of information is available on the University's International Staff website for staff who are relocating to Oxford from abroad, at <a href="https://www.admin.ox.ac.uk/personnel/staffinfo/international/">www.admin.ox.ac.uk/personnel/staffinfo/international/</a>.

#### The University of Oxford Newcomers' Club

The Newcomers' Club is aimed at helping partners of newly-arrived visiting scholars, graduate students and academic members of the University to settle in and to meet people in Oxford.

#### Transport schemes

The University offers a range of travel schemes and public transport travel discounts to staff. Full details are available at <a href="http://www.admin.ox.ac.uk/estates/ourservices/travel/">www.admin.ox.ac.uk/estates/ourservices/travel/</a>.

#### University Club and University Sports Facilities

The University Club provides social, sporting and hospitality facilities. It incorporates a Club bar, a cafe and sporting facilities, including a gym. See <u>www.club.ox.ac.uk</u> for all further details.

University staff can use the University Sports Centre at discounted rates, and have the chance to join sports clubs. Please visit <u>www.sport.ox.ac.uk/oxford-university-sports-facilities.</u>

#### Childcare and Childcare Vouchers

The University offers quality childcare provision services at affordable prices to its employees. For full details about the services offered, please visit <u>www.admin.ox.ac.uk/childcare/</u>. **NB: Due to the high demand for the University's nursery places there is a long waiting list.** 

The University also offers nursery fee payment schemes to eligible staff as an opportunity to save tax and national insurance on childcare costs. Please visit <u>www.admin.ox.ac.uk/childcare</u>.

#### Disabled staff

The University is committed to supporting members of staff with a disability or long-term health condition and has a dedicated Staff Disability Advisor. Please visit <a href="https://www.admin.ox.ac.uk/eop/disab/staff">www.admin.ox.ac.uk/eop/disab/staff</a> for further details.

#### **BUPA - Eduhealth**

Bupa Eduhealth Essentials private medical insurance offers special rates for University of Oxford staff and their families <u>www.eduhealth.co.uk/mini-site/</u>.

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#### **Appendix A: Executive Summary**

The aim of this project is to discover the deep psychological connections between religion and morality, and how these connections may be expressed differently across time and place, in different cultural and physical environments. Our main contention is that such questions have, thus far, been poorly posed. Rather than treating the issue as a single question about two monolithic phenomena (i.e., "religion" and "morality" respectively), we have a more complexand realistic-view based on recent cognitive and evolutionary research. Our Big Questions are therefore about the multiple, distinct cognitive foundations of religion and morality, and how they overlap and interact with one another to produce the cultural manifestations that we encounter around the world (e.g., legal codes, systematic theologies). We believe that this deeper and more complex understanding of the connections between religion and morality is much needed in our rapidly changing cultural landscapes because as cultures-including their religious and moral components-meet and potentially clash, negotiating cross-cultural encounters will require an accurate understanding of how different cultural beliefs resemble and differ from each other cognitively. Conclusions, both scientific and social, based on faulty assumptions about the nature of religion and morality can be dangerous: they may lead to oversimplified conclusions about how to negotiate the cultural challenges ahead of us.

The two main activities of this project are: (a) a large, multi-national correlational study that provides a rich description of the religious and moral landscape in a wide range of cultural contexts; and (b) a core experimental psychological research programme based at the Institute for Cognitive and Evolutionary Anthropology (University of Oxford) and the Centre for Research in Psychology, Behaviour and Achievement (Coventry University). Through these two research activities, the project is able to answer various research questions. The first activity enables us to evaluate the universality of patterns first established in Western Christian samples, as well as to explore different relationships among individual-level variables (e.g., religious beliefs, moral beliefs, personality, trait affect) and cultural-level variables (e.g., economics, pathogen prevalence, individualism/collectivism, normative tightness). The second allows us to test specific causal hypotheses. In particular, we will focus on how human beings' social intuitions provide a common root for some of our religious beliefs (especially beliefs in gods) and moral beliefs (especially beliefs about care/harm); how our basic *disgust* responses contribute to other religious (especially ritualistic) and moral (especially purity-relevant) beliefs; and how our natural preference for so-called minimally counterintuitive (i.e., intuitively surprising; e.g., invisible persons) information is an important factor in the spreading of religious and moral ideas both. We have chosen to focus on these hypotheses because they build on existing empirical and theoretical work, including some work that we and our collaborators have done.

Our target audience is broad, first focusing on the scientific community of researchers from different disciplines interested in the nature of religion and morality. We are also interested in reaching out to religious, moral, and political leaders, holding discussions with them with an end goal of deepening understandings across traditional boundaries. Finally, our research will also be of great interest to the general public, as our topic affects the lives of billions of people. Our outputs will therefore consist of academic publications, conference presentations, and public outreach activities, both to the general public and to religious leaders more specifically. We expect this project, with its powerful combination of two burgeoning research programmes—the cognitive science of religion and the psychology of moral foundations—to have high impact on researchers in social psychology, moral psychology, religious studies, anthropology, sociology, theology, and philosophy. Our most direct impact will be on the large group of research students and international collaborators, whom we expect will carry on this research into the future.

### Appendix B: Laboratory and Field Experiments

Subproject 2 (SP2) consists of a series of laboratory and field experiments, to be crossculturally replicated via international collaborators and strategically-placed postdoctoral researchers. The cross-cultural replications will focus on nonWestern and nonAbrahamic cultures; materials will be suitably modified for cross-cultural data collection. The studies described here are provisional, as priorities might change with the empirical evidence obtained. Furthermore, details of the protocols will depend on cross-cultural applicability; the post-doctoral researchers we will hire—who will also serve as local experts—will be integral in the final design of these studies. SP2 consists of three blocks of studies that respectively examine the transmission of religious and moral ideas; the direct causal relationships between religion and morality; and the indirect/contextual causes (esp. environmental factors) of religious and moral change. Thus, 2A is concerned with transmission, while 2B and 2C are concerned with causes (and therefore change, as causation is the key to change).

### A: The transmission of religious and moral ideas

This first block examines the role of minimally counterintuitive concepts in the transmission of moral narratives. As information recall is an essential ingredient in information transmission, we begin here. Based on previous work on MCI theory, we want to know whether the inclusion of supernatural elements facilitates memory of moral information. Thus, in these studies, the extent to which MCIs are present in moral narratives is the independent variable, and recall and application of moral information is the dependent variable.

In Studies A1 and A2, participants will be presented with vignettes, in which moral/amoral/immoral actions are taken; some of the vignettes will contain supernatural (i.e., minimally counterintuitive) elements (e.g., superpowers, miracles). The extent to which the supernatural elements are relevant for the moral actions will be varied. Participants' memory for the moral decisions will be measured, as will their tendency to generalise the moral lessons to other contexts.

These studies build on the theories and methods in the research literature on memory for minimally counterintuitive narratives (Norenzayan, Atran, Faulkner, & Schaller, 2006; Upal, 2011) and morality in superhero narratives (Carney, Dunbar, Machin, Dávid- Barrett, & Júnior, 2014; Pizarro & Baumeister, 2013).

#### B: The causal relationships between religion and morality

This second block concerns examines more precisely the causal relationships among different aspects of religion and morality.

#### Priming studies

Most priming studies in this research area have taken a minimal approach to religious priming, merely reminding participants of single concepts (e.g., "God") or an undifferentiated set of concepts. In contrast, we will prime participants with specific god and moral concepts, and measure specific moral and religious attitudes. Studies B1 to B6 investigate the effects of specific god concepts on moral judgements, and vice versa. In B1 and B2, we expect the salience of different moral domains to affect religious beliefs in different ways. In Studies B3 to B6, we expect the salience of different religious belief to affect moral judgements in different ways. In Studies B7 to B9, we expect the congruence between moral and religious (i.e., ritual) information to predict ritual efficacy judgements. In B10 to B13, we expect co-participation in rituals to increase moral and religious agreement.

In Studies B1 and B2, participants will be primed with one of the moral domains, prior to answering questions about their god concepts, including an open-ended measure to be content coded later and a questionnaire measure (Zahl & Gibson, 2012). We predict that anthropomorphic god concepts will be associated with care/harm moral concerns more so that other moral concerns. Other associations will also be explored.

In Studies B3 and B4, participants will be primed with anthropomorphic or nonanthropormophic god concepts (e.g., personal v. abstract language for gods; see Morewedge & Clear, 2008). Then they will make moral judgements about vignettes of moral violations in each of the five moral domains, from Clifford, Iyengar, Cabeza, and Sinnott-Armstrong's (2015) standardised stimulus database. To estimate the effects of the priming manipulation, ANOVAs will be conducted, controlling for demographic variables and trait levels of religious belief. Studies B5 and B6 extend this work by priming participants with other specific divine attributes; these attributes will in part be derived from the findings of B1 and B2, but we have particular interests in divine power and knowledge. Given the potential cross-cultural and inter-individual variation in people's attitudes toward and beliefs about divine power and knowledge, we will also assess these to examine moderation effects.

In each of B1 to B6, to estimate the effects of the priming manipulation, ANOVAs will be conducted, controlling for demographic variables and trait levels of religious belief.

#### Perceived ritual efficacy studies

Studies B7–B9 investigate the psychological processes underlying perceptions of absolution ritual efficacy, particularly for sanctity/degradation violations, in line with Boyer and Lienard's (2006) theoretical work on ritual efficacy and hazard precaution.

In Studies B7, B8, and B9, participants will be told to consider absolution rituals for a variety of moral violations (Clifford et al., 2015). In B7, participants will view videos of absolution rituals, and segment them—that is, divide them into discrete units—by pressing a key (Nielbo, Schjoedt, & Sorensen, 2013); we predict that participants will make more segments after exposure to sanctity/degradation violations than other violations. Increased event segmentation is an indication that the participants are construing the event in ritualistic terms (Nielbo et al., 2013). In B8, participants will be presented with scrambled instructions for rituals, which they have to piece together written instructions to form a whole absolution ritual; we predict that, for sanctity/degradation violations, the rituals will involve more repetition, rigidity, and redundancy . In B9, participants will be asked to recall their own moral violations prior to constructing absolution rituals for themselves (cf. B8): again, we predict that, for sanctity/degradation violations, the rituals will involve more repetition, rigidity, and redundancy.

In each study, to estimate the effects of moral domain on event segmentation, ANOVAs will be conducted, controlling for demographic variables and frequency of ritual practice (Norton & Gino, 2014).

#### Rituals and religious/moral agreement studies

Collective rituals are generally assumed to produce social cohesion within groups, but there is some recent evidence that the prosocial effects of ritual participation might transcend group membership (Reddish, Bulbulia, & Fischer, 2014). We therefore aim to examine the effects of two elements of collective rituals implicated in positive social effects: synchrony and causal opacity. In particular, we examine their effects on moral and theological agreement.

In B10 to B13, groups of participants will complete a ritual prior to discussing a moral (B10 and B12) or theological topic (B11 and B13). The rituals will vary on the extent to which they include synchronous actions (B10 and B11; Reddish et al., 2014) or causally opaque actions (B12 and B13; McCambridge, Jackson, Jong, & Halberstadt, 2016). After discussing the moral or theological topic, participants will individually rate their agreement with the relevant

theological and/or moral propositions. Participants' scores will be compared within groups. We hypothesize that synchronous and causally opaque ritual participation will increase intra-group agreement.

### C: Environmental effects on religion and morality

Evolutionary theorists posit that moral foundations emerged as solutions to specific problems in the ancestral environments. If so, salience of these problems or associated emotions should activate those moral domains. On the hypothesis that morally-concerned supernatural agents function to police social norms (Norenzayan, 2013), this should lead to changes in the moral concerns attributed to those supernatural agents.

Studies C1 and C2 involve activating moral domains by increasing the salience of hypothesized environmental triggers (e.g., distress of kin for care/harm; external agentic threats for loyalty/betrayal; disgust-inducing stimuli for sanctity/degradation), prior to assessing participants' beliefs about gods' moral concerns. In each case, participants will be asked to imagine scenarios (C1) or be primed with images from the International Affective Picture System (Lang, Bradley, & Cuthbert, 2008) (C2) before they are asked about gods' attitudes toward moral violations (cf. B3 and B4).

Studies C3 and C4 extend this work to examine perceptions of ritual efficacy (cf. B7, B8, B9). Participants will be primed with emotions associated with moral judgements (e.g., disgust and anger), using stimuli from the International Affective Picture System, prior to completing an action segmentation task and making ritual efficacy judgements (Legare & Souza, 2012). Again, we predict a link between sanctity/degradation violations and fine-grained event segmentation and a preference for rigid/repetitive/redundant rituals. These studies build on the theories and methods in the research literature on the evolution of disgust (e.g., Oaten, Stevenson, & Case, 2009), hazard precaution and rituals (e.g., Boyer & Lienard, 2006), and the role of disgust in moral judgements (e.g., Horberg, Oveis, Keitner, & Cohen, 2009; Pizarro, Inbar, & Helion, 2011).

In each case, to estimate the effects of emotion and moral domain (and their interaction) ANOVAs will be conducted, controlling for demographic variables and frequency of ritual practice.

#### D: The role of karma beliefs and supernatural reward in morality

Beyond gods and other similar supernatural agents exist other supernatural beliefs such as the non-agentic force of karma. Little research has been done on the of role karma in enforcing moral behaviour across different moral domains. Karma has been claimed to work in a similar way to Big God beliefs in maintaining normative behaviour, but much of the explicit teachings about karma, particularly in Buddhism, are based on the rewards one gets for good behaviour, rather than emphasising the punishment delivered for bad behaviour. Previous research has found that punishment is what drives the effects of Big God beliefs on moral behaviour (Purzycki et al., 2016), but these traditions often lack the explicit reward based narrative present in karma beliefs.

Studies D1 and D2 use a vignette paradigm look at the role of karma beliefs across different domains among Buddhist and non-Buddhist participants in Singapore (D1), and Buddhists in Burma and Japan (D2). Reward and punishment effects will be compared across domains. Study D3 looks at the factor structure of moral domains and their relations to karma and afterlife beliefs. Study D4 uses a modified public goods game with a threat of external reward or punishment to see if reward and punishment have differing effects on behaviour across populations.

These studies will be analysed using multilevel regression models and confirmatory and exploratory factor analysis.

#### In summary:

SP2A looks at supernatural elements as a causal factor in moral information transmission; SP2B looks at congruence in the causal connections between religious and moral variables; SP2C looks at environmental causal factors in the connection between religious and moral beliefs. In each case, the specific religious or moral domains examined are based on previous theoretical and empirical work. Future research should extend this work into other domains. SP2D looks at the connection between non-agentic force of karma and moral domains. Special attention will be paid to the additional role of reward as well as punishment.