

PSYCHOLOGY OF RELIGION
RELS 237/337



Course Description: Can religious belief and behaviour be explained by science? What do cognitive and evolutionary psychology tell us about belief in god? Is religion universal? Is religion a product of human evolution (i.e., natural)? How does religious belief develop across the lifespan? What social functions does religion serve?

Combining scholarship on religion and psychology, this paper introduces students to the important interdisciplinary field of the psychology of religion. In addition to providing answers to the above questions, students will learn about the latest research on the psychology of terrorism, the psychology of atheism and the psychological effects of religion on prejudice/tolerance.

This paper is divided into three modules:

1. The cognitive foundations of religious belief
2. The social functions of religious belief
3. Explaining modern forms of belief: from terrorists to atheists

About the lecturer and how to contact him:

John Shaver is Lecturer in Religion. John holds a Ph.D. with distinction in Anthropology from the University of Connecticut. His research investigates the cognitive and evolutionary dynamics of religious change, with a particular focus on the religions of the Pacific. John has conducted research in the Czech Republic, Fiji, Mauritius, New Zealand and the United States.

I prefer that you try to contact me in person at my office or on the phone if you have a question. Feel free to ring on my office phone or mobile between 9am and 5 pm.

Dr. John Shaver | john.shaver@otago.ac.nz | 03-471-6459 (office) 0278872973 (mob)
Office hours: after class or by appointment

GENERAL INFORMATION ON BLACKBOARD/READINGS/LECTURES/TUTORIALS

For All Students

BLACKBOARD: This course relies heavily on the web-based program, Blackboard. Please make sure you have access to this. If not, please contact the ITS helpdesk ASAP (<http://www.otago.ac.nz/its/contacts/>). Blackboard uses your University email address, so **please make sure that you check your university email at least every couple of days.**

READINGS: Lectures build upon and presume knowledge of the **assigned readings**, all of which are **available online**. **I assume that students have done the readings before the lectures.** You will be given in class quizzes that test your knowledge of the assigned readings (see below). Assigned readings for lectures are listed on the schedule below. I have chosen the readings very carefully and kept page-counts minimal. Please do your best to keep up.

For Students Studying On Campus

LECTURES: We will meet once a week (Mon 2:00 – 3:50pm). As much of the content in this class is delivered through lectures, and there are frequent in class quizzes, I expect that you will attend all lectures.

TUTORIALS: On campus students do not have tutorials, however, you are free to attend the distance tutorials through Zoom (see below).

For Students Studying By Distance¹

LECTURES: The audio and powerpoint slides of lectures will be **live-streamed** at the times above via Otago Capture (see link on Blackboard) so that students who choose can participate in real time. Questions and comments can be made by texting or phoning John's mobile at 0278872973 during the lectures. Please include your name. After class, the audio/video will be **archived online** for you to listen to at your convenience. **Please note:** It is expected that all Distance students will view/listen to these recordings in their entirety within the weeks they are given. Lectures build upon each other. Therefore, delays in listening will negatively impact your learning and retention.

TUTORIALS: As Distance students do not always have the benefit of being able to ask questions in class or to meet during office hours. I will hold **online fortnightly tutorials** from **7pm-8pm on Thursday evenings**. These tutorials will be through Zoom. Attendance is not mandatory – these tutorials are for you to discuss and clarify material—however it is strongly encouraged and on campus students are welcome to attend. I will provide the dates of tutorials through Blackboard.

¹ If you have any problem with any of the online platforms (Blackboard, Otago Capture, Zoom) please make sure you contact the ITS Service Desk ASAP! <http://www.otago.ac.nz/its/contacts/>

GENERAL INFORMATION: Please look at the “distance information sheet” on the Religion Programme website before the semester begins
(<http://www.otago.ac.nz/religion/courses/index.html>)

Learning Outcomes (Aim/Objectives) of this Paper

By the end of this course, students should be able to:

- (a) understand psychological theories of religion, and evaluate research that tests these theories,
- (b) understand the different methods employed in the psychology of religion, and their relative strengths and weaknesses,
- (c) evaluate arguments based on empirical data, and
- (d) write a clear, persuasive, and original commentary about an evidence-based argument.

Students completing the course at 300-level should also be able to:

- (a) relate psychological approaches to religion to one other,
- (b) argue for the merits of one theory relative to another, based on evidence, and
- (c) articulate the strengths and weaknesses of psychological approaches to religion.

Weekly Topics and Readings

Week 1 (27/2/17): Science and the humanities

Readings:

1. Bulbulia, J. and Edward Slingerland. (2012) "Religious Studies as Life Science." *Numen* 59: 564-613.
2. Bulbulia, Joseph. (2004) "The cognitive and evolutionary psychology of religion." *Biology and philosophy* 19.5: 655-686.

Week 2 (6/3/17): Religion and child development

1. D. Kelemen. (2004). Are children "intuitive theists"? Reasoning about purpose and design in nature. *Psychological Science*, 15:295–230.
2. Rottman, Joshua, and Deborah Kelemen (2012). "Is there such a thing as a Christian child? Evidence of religious beliefs in early childhood." In *Science and the World's Religions: Origins and Destinies*, McNamara, P., & Wildman, W. (Eds.), pp. 205 -238. Santa Barbara, CA: Praeger Press.

Week 3 (13/3/17): Religious transmission

1. C.H. Legare and R.E. Watson-Jones (2015). The evolution and ontogeny of ritual. In D. M. Buss (Ed.), *The Handbook of Evolutionary Psychology*, pp. 829-847. Hoboken, NJ: Wiley & Sons.
2. Alcorta, Candace S. (2006). Religion and the life course: Is adolescence an "experience expectant" period for religious transmission. In *Where God and Science Meet: How Brain and Evolutionary Studies Alter Our Understanding of Religion*, Volume 2: Evolution, Genes, and the Religious Brain, Patrick McNamara (Ed.), pp. 55-79, Westport, CT: Praeger Publishers.

Week 4 (20/3/17): The social effects of religious belief Part 1 First Critical Response essay due (20/3/17).

1. Norenzayan, A., Henrich, J, & E. Slingerland (2013) Religious Prosociality: A Synthesis. In P. J. Richerson & M. H. Christiansen (Eds.), *Cultural Evolution: Society, Technology, Language and Religion*. Cambridge, Massachusetts: MIT Press.
2. Sosis, R. (2006). Religious behaviors, badges, and bans: Signaling theory and the evolution of religion. in *Where God and Science Meet: How Brain and Evolutionary Studies Alter Our Understanding of Religion*, Volume 1: Evolution, Genes, and the Religious Brain, ed. Patrick McNamara, pp. 61-86, Westport, CT: Praeger Publishers.

Week 5 (27/3/17): The social effects of religious belief Part 2

1. Fincher, C. L., & Thornhill, R. (2012). Parasite-stress promotes in-group assortative sociality: The cases of strong family ties and heightened religiosity. *Behavioral and Brain Sciences*, 35(02), 61-79.

2. D. Xygalatas, P. Mitkidis, R. Fischer, P. Reddish, J. Skewes, A. W. Geertz, A. Roepstorff, and J. Bulbulia. (2013). Extreme rituals promote prosociality. *Psychological Science*, 0956797612472910.

Week 6 (3/4/17). In-class tutorial/Review session

Week 7 (10/4/17): Mid-term test

Week X (17/4/17): No class, University Break

Week 8 (24/4/17): Religion, stress and anxiety (guest Professor Joseph Bulbulia)

1. Sosis, R., & Handwerker, W. P. (2011). Psalms and coping with uncertainty: Religious Israeli women's responses to the 2006 Lebanon war. *American Anthropologist*, 113(1), 40-55.

2. Sibley, C. G., & Bulbulia, J. (2012). Faith after an earthquake: A longitudinal study of religion and perceived health before and after the 2011 Christchurch New Zealand earthquake. *PLoS ONE*, 7(12), e49648.

Week 9 (1/5/17). Religion and the psychology of mating
Second Critical Response essay due (1/5/17).

1. Blume, M. (2009). The reproductive benefits of religious affiliation. In *The Biological Evolution of Religious Mind and Behavior* (pp. 117-126). Springer Berlin Heidelberg.

2. Weeden, J., Cohen, A. B., & Kenrick, D. T. (2008). Religious attendance as reproductive support. *Evolution and Human Behavior*, 29(5), 327-334.

Week 10 (8/5/17): Religion and prejudice

1. Hunsberger, B., & Jackson, L. M. (2005). Religion, meaning, and prejudice. *Journal of Social Issues*, 61(4), 807-826.

2. Shaver, J. H., Troughton, G., Sibley, C. G., & Bulbulia, J. A. (2016). Religion and the unmaking of prejudice toward Muslims: evidence from a large national sample. *PLoS ONE*, 11(3), e0150209.

Week 11 (15/5/22): The psychology of terrorism

1. Ginges, J., Hansen, I., & Norenzayan, A. (2009). Religion and support for suicide attacks. *Psychological Science*, 20(2), 224-230.

2. Kiper, J. and Richard Sosis Why terrorism terrifies us. In *Evolutionary Psychology and Terrorism: New Perspectives on Political Violence*, ed. M. Taylor, pp. 102-123. New York: Routledge.

Week 12: 22/5/17: Religion, identity fusion, and terrorism

1. Whitehouse, H., & Lanman, J. A. (2014). The ties that bind us. *Current Anthropology*, 55(6), 674-695. Note: Read only the article, not the commentaries and reply
2. Whitehouse, H., McQuinn, B., Buhrmester, M., & Swann, W. B. (2014). Brothers in arms: Libyan revolutionaries bond like family. *Proceedings of the National Academy of Sciences*, 111(50), 17783-17785.
3. Atran, S., Sheikh, H., & Gomez, A. (2014). Devoted actors sacrifice for close comrades and sacred cause. *Proceedings of the National Academy of Sciences*, 111(50), 17702-17703.

Week 13: 29/5/17: The psychology of atheism and final review Commentary Essay due (5/29/17)

1. Farias, M. (2013). The psychology of atheism. *The Oxford Handbook of Atheism*, 468-482.
2. Gervais, W. M., & Norenzayan, A. (2012). Analytic thinking promotes religious disbelief. *Science*, 336(6080), 493-496.

Final Test: TBA

ASSESSMENTS, SUBMITTING WORK, DEADLINES

I. In class quizzes (20% of mark)

There will be SEVEN in class quizzes over the course of the semester. These quizzes will be short (usually multiple choice) quizzes that test your knowledge of the assigned readings and/or your comprehension of the previous week's lecture material. **Your two lowest quiz grades will be dropped.** In other words, of the seven in class quizzes, only 5 will count towards your final mark (4% for each of your 5 highest quiz grades). **You will get 50% marks for each question that you answer, even if your answer is wrong.** The goal of these quizzes is to encourage reading and discussion and to reward students who are prepared and keep up with the material. Some quiz questions will appear on the midterm and final tests.

Quizzes will be administered at the beginning of class and ***you cannot make up quizzes if you miss class.*** Distance students will have a 48 hour window in which they must take the quiz, and these quizzes will be timed (10-15 minutes, depending on the format).

II. Critical response essays (30% of mark, two with each worth 15%) Due Monday March 20 at 5pm and Monday May 1 at 5pm

Twice over the course of the semester you will write a short essay that critiques one of our readings. For the first essay, you may choose any reading we've done up until, and including, the day the essay is due (week 1 to week 4). For the second essay, you must choose a reading that we've covered since the first essay was due (week 5 to week 9). The goal of these essays is to improve your critical thinking and writing skills.

These essays must very briefly summarize and evaluate/critique one of our course readings. For 237 students, each of these essays must be between 1,000-1,250 words. For 337 students, each essay must be between 1,250-1,500 words. Marks will be taken off for essays that fall under or exceed these word limits. A grading rubric for essays will be posted on Blackboard.

To assist you in writing your essays, I have included a template to help give you structure to your essays and examples of exemplary essays from previous students.

III. Commentary on a recent article Essay (20% of mark) Due Monday May 29 at 5pm

For this essay you must choose a recent journal article (2011-present) that focuses on some aspect of the psychology of religion and then you must write a commentary on the article. The format of your essay will be similar to your critical response essays (i.e., summarise, evaluate/critique), but ***you must critique the author's writing using readings and theories that we've covered in the class.*** For 237 students, these essays must be 1,000-1,250 words. For 337 students, these essays must be 1,250-1,500 words. Marks will be taken off for essays that fall under or exceed these word limits.

For essay writing, the Department requires that you use the 14th edition of the Chicago Style Guide, which is the norm for many academic journals in the humanities and often recommended for theses in the humanities. The Department has prepared a Study and Style Guide, which outlines the Chicago Style and offers other advice on essay presentation. You may find it at <http://www.otago.ac.nz/religion/pdfs/styleguide.pdf>

IV. Two 2-hour Tests (30% of your mark, two with each worth 15%) April 10 and TBA

There will be two 2-hour exam that will assess whether you've listened to lectures, done the readings and reviewed the key concepts discussed in this course. To be clear: the exam will NOT ONLY cover the readings, but the topics discussed in lectures too.

Tests will consist of both multiple choice questions and short essay questions. Some of the multiple choice questions will come directly from the quizzes. I will provide you with review sheets about a week before the tests (posted to Blackboard), and we will spend some class time and/or tutorial time reviewing the material.

The date for the final test will be sent to you as soon as it has been set by the Examinations Office. All arrangements for examinations are handled by the Examinations Office, as outlined in the Student Handbook. Please contact them if you have questions. Further information on the format of the examination will be given towards the end of the course.

Submitting Written Work

All work must be **submitted electronically** (as a Word or PDF file) via the 'Assignment' feature on Blackboard by 5pm on the assigned due date. You may email me the essays or essay outline ONLY if you have trouble accessing blackboard. You will be responsible for confirming that your work has been uploaded to BB and/or received by me. Before you submit your essay, make a backup copy, either in electronic form or on paper, and keep it in a safe place. Students should fill out and attach the departmental **plagiarism declaration** as a coversheet to their essays when submitting. These can be found on the Religion Program website and signed electronically.

We also request that **campus students submit their work in hard copy** to the Religion Department office on the 4th Floor of the Burns Building (on South end).

Deadlines, Extensions and Late Submission

Students have full responsibility for the prompt submission of assignments. For the essay assignments, an extension of the due date may be granted only in HIGHLY exceptional circumstances, usually on medical grounds, by emailing the course coordinator or the departmental administrator at least one week **prior** to the due date. In the event of an extension being obtained on medical grounds, a doctor's certificate verifying the need for an extension should be attached to the assignment when it is submitted. Please note that poor time management is not acceptable as a reason for seeking an extension.

Late submissions will be penalized at a rate of 5% of the assignment-marks per day late.

Plagiarism

Students should make sure that all work submitted is their own and should fill in and attach a signed coversheet to their essay. Plagiarism is a form of dishonest practice. Plagiarism is defined as 'copying or paraphrasing another's work whether intentionally or not and presenting it as one's own' (*University of Otago Calendar*, 2006, p.193). In practice this means that plagiarism

includes *any* attempt in any piece of submitted work (e.g. an assignment or test) to present as one's own work the work of another (whether of another student or a published authority) including work from the Internet.

Any student found responsible for plagiarism in any piece of work submitted for assessment shall be subject to the University's dishonest practice regulations which may result in various penalties, including forfeiture of marks for the piece of work submitted, a zero grade for the paper, or in extreme cases exclusion from the University. For more advice on this policy see <http://www.otago.ac.nz/study/plagiarism.html> and the 'Study skills' section in Blackboard.

Critical Response Essay Template

TITLE

Name:
Student Number:
Date (submitted):
Due date for essay:
Word count:

OPENING

In this essay I will consider *{The author's}* idea that *{claim...}*.

OR

I will argue that *{your thesis/central argument...}*

AND

My argument is important because *{summarise reason(s)}*.

SUMMARISE

1. *{The author}* argues that ...*{claim}*.
2. The author cites the following as evidence for *{claim}*.. ... [*cite the text*]
3. [*CHOOSE ONE*]
 - a. This evidence is meant to support the *{claim}*.. by... [*cite the text*]

OR

- b. While the authors do not explicitly describe how this evidence is linked to their...*{claim/finding}*, The strongest case that can be made for linking this evidence to their [*claim/finding*] is ...*[reason from the text]*
4. [*CHOOSE ONE*]
 - a. The author argues/implies that the significance of his claim is [*cite the text*]...

OR

- b. While the author does not state the importance of his claim clearly, I would argue that its significance is *[give your own assessment]*...

EVALUATE / CRITIQUE [NOTE: WHEN GATHERING EVIDENCE, YOU MAY USE OTHER ASSIGNMENTS IN THIS COURSE AND YOU MAY CONDUCT INDEPENDENT RESEARCH. HOWEVER, THIS IS NOT A REQUIRMENT.]

The author has claimed [xxx]. I argue that [state your claim]. My claim is plausible because:

{argue your main points in order. Examples below}

1. The strength of {my claim}. is [THINK SYMPATHETICALLY AND CRITICALLY: AIM TO PERSUADE BY USING REASONS AND/OR EVIDENCE THAT YOUR AUDIENCE WILL LIKELY FIND COMPELLING]
2. The main weakness of {claim}. is ...[THINK SYMPATHETICALLY AND CRITICALLY].

or

1. I argue that {author's piece of evidence} is unconvincing / convincing because *{give reasons...THINK SYMPATHETICALLY AND CRITICALLY}.*
2. The author / others might reply that {counterargument} because *{reasons...THINK SYMPATHETICALLY AND CRITICALLY}.*
3. Though {insightful / intuitive / plausible} this counterargument fails because *{give reasons...THINK SYMPATHETICALLY AND CRITICALLY}.*

or

1. While {The author} has cited evidence for their view, there is further evidence that confirms / contradicts his view. For example *{give an example of confirming/contradictory evidence...THINK SYMPATHETICALLY AND CRITICALLY}.*
2. Notably, there is evidence that supports the opposite view *{give example of opposite evidence} THINK SYMPATHETICALLY AND CRITICALLY].*
3. To summarise, the evidence for {view you hold} is convincing because *{give reasons...THINK SYMPATHETICALLY AND CRITICALLY}.*

CONCLUSION

In this essay I have critically evaluated {author}'s claim that {claim}, arguing that {your central argument/thesis}.
{brief summary of main points}

The importance of my thesis is that *{give reasons}*

Further studies might address *{describe lingering questions}*

Examples of Exemplary Essays

RELS 237 Example Essay

Name: XXXX

Student Number: XXXXX

Word count: 1,114

Reference details of the [paper/chapter/experiment/critical review] analysed here: “Meta-atheism: Religious Avowal as Self-Deception” Georges Rey in Martin, R. and Kolak, D., *The Experience of Philosophy*, 6th ed., Oxford UP, 2005.

In this paper I will examine “Meta-atheism: Religious Avowal as Self-Deception” by Georges Rey. I will set out the model Rey proposes, analyse the validity and strength of his conclusions and the usefulness of his findings. I will attempt to refrain from discussing Rey’s arguments on the case for atheism in favour of a discussion of Rey’s model and conclusions.

In his paper Rey posits a model called ‘Meta-atheism’. This model is based on ‘self-deception’, something we do regularly in everyday life. Self-deception is the belief in something despite knowing that in some sense it is false, Rey uses the examples of a person denying that they have the symptoms of a serious disease or a parent exaggerating the talents of their child while avoiding the flaws. Self-deception is most obviously seen when someone’s actions contradict or conflict with his or her beliefs. Rey uses the examples of freedom espousing communists tolerating or ignoring Stalin’s tyranny, or defenders of American foreign policy tolerating the death-squads in Latin America (perhaps a more up to date example would be those ‘freedom loving’ Americans who tolerate the breakdown of the rule-of-law at Guantanamo Bay). Religion, Rey claims, is another form of self-deception. Just as a staunch Communist is, at some level, abhorred by Stalin’s atrocities, the religious know deep down that God does not exist. Why? According to Rey the answer would be that just as Stalin’s tyranny is too obvious to completely ignore, the case for atheism is too obvious for a theist not to disbelieve at some level.

What Rey is essentially arguing is that self-deception is an inconsistency between belief and action. Religious people claim to believe devoutly in their religion yet do not always behave in a manner consistent with it. Rey uses this to infer that at some level these people are atheist. However, Rey takes his conclusions further than his evidence allows. There is no reason to suppose that self-deception in religion implies meta-atheism. It is possible that these people are still theist but not completely according to their avowed religion. Inconsistency of action and belief could imply that at some level someone is not Christian (for example) but it does not imply that they are atheist. To use Rey’s own example of the otherwise very religious mother who would not let her daughter eat ashes in the emulation of a Saint cannot surely be evidence of her meta-atheism. All it shows is that her actions are not consistent with her avowed beliefs, it does not imply meta-atheism.

Presumably Rey would argue that even the most devout religious extremists are meta-atheists. Would this include those who take their own lives (suicide bombers and other martyrs) in the name of their religion? Taking one’s own life is the ultimate worldly sacrifice. To put it in

horribly rationalistic terms – if one takes their own life in the name of their religion and are wrong about what follows (regarding an afterlife etc.) the cost of their action verges on infinite. Would a meta-atheist really make the decision to sacrifice themselves in this way? It is hard to imagine that someone would take their own life in the name of their religion if at some level they were atheist. At what point in Rey's model does self-delusion become so great that you can no longer say someone is a meta-atheist?

Rey argues that meta-atheism occurs because atheism is obvious to anyone with a normal Western education. Indeed, Rey makes some strong and convincing arguments for atheism, however his argument that atheism is obvious is not so well founded – especially in light of tiny proportion of the world's population (or even in the West alone) that is atheist. Rey needs to show that atheism is objectively obvious, not merely obvious to him and other atheists – in this regard Rey does not succeed. Rey is correct that there are elements of science and the natural world that obviously conflict with the doctrine and theology of religion. While Rey is correct that many may believe at some level that the science is correct (indeed, many Christians do not believe in a young earth or the literal occurrence of a world wide flood, for example), this does not imply meta-atheism, it merely implies a form of meta-religiosity that is not the same as their avowed religious beliefs.

The logic of Rey's argument seems to be as follows:

Atheists know that science and religion conflict and they believe science is correct over religion.

Religious people know that science and religion conflict and at some level believe elements of science are correct over religion.

Religious people are atheist at some level.

It is hard to escape that feeling that his argument is a non sequitur. Not only is his second premise questionable, but the mere knowledge that religion and science conflict and an acceptance to some degree of the correctness of science and the fallibility of religion does not preclude belief in a God or necessitate a lack of belief.

Rey attempts to distinguish 'philosophy' from 'common sense'. 'Common sense' is arguably the wrong choice of word, he is actually arguing between philosophy and empirical analysis. Regardless, this distinction is meritorious, Rey is correct that some issues do not require deep philosophical thought and can be comprehensively dealt with purely by empirical argument. Rey argues that this is true of religion. Arguably he is correct that the case of ghosts, gremlins and evil spirits fall into this category, but can the arguments for a creator God, external to the universe really be defeated by empirics alone? Perhaps, but it seems Rey is hasty to dismiss the need for philosophical contemplation in the realm of religion, viz. belief in God.

Rey's approach is interesting, but lacks refinement. Undoubtedly there are meta-atheists out there, but it is hard to accept that they are as prevalent as Rey suggests. A case for further, empirical based research on meta-atheism remains, although it would face substantial ethical and methodological issues. Even if Rey goes too far in his conclusion on meta-atheism, a more broader case for some sort of 'meta-theism' or 'meta-religiosity' still exists – people often act differently to their avowed religious beliefs, and while this may not imply atheism, it may imply that different levels of theistic (or atheistic) belief exist once any self deception is stripped away. Again, further research in this area would have value.

RELS 337 Example Essay

Name:XXXXX

Student Number:XXXXX

Word Count: 1276

Reference details of the paper analysed here:

Bering, J. and Johnson, D. *Hand of God, Mind of man: Punishment and Cognition in the Evolution of Cooperation*. In The 'Nature of Belief: Scientific and Philosophical Perspectives on the Evolution of Religion Schloss, J. and Plantinga, A. Ed. (forthcoming)

In this analytic paper I will review Jesse Bering and Dominic Johnson's paper on belief in supernatural agency as a necessary and probable factor in the evolution of cooperation. The purpose of this review is to identify and describe the case they make regarding theism as an explanation of cooperation and as being likely to be selected for independently. I consider their argument to be strong, but the main weakness in this paper comes in considering the importance of it – I think they overestimate the weight and importance of religion as a conclusive explanation for the existence of cooperation in humans.

Their two arguments

Johnson and Bering make two broad arguments in this paper. The first is that a fear of supernatural punishment is a plausible explanation for the prevalence of cooperation and 'strong altruism' observed in humans. In doing so they reject as insufficient other theories advanced in this area. A fear of supernatural punishment, they argue, provides a method of ensuring cooperation that does not need to be enforced by other individuals or groups, thus avoiding common problems with such enforcement. However, as they observe, this would only work if individuals attribute negative life (or afterlife) consequences as caused by the supernatural agent.

The secondary point they make deals with this condition directly – Johnson and Bering argue that this specific sort of belief is highly evolutionarily plausible as humans are predisposed to teleological intuitions. Specifically, humans have evolved a tendency to attribute life events to supernatural agency, increasing the possibility that they will subscribe to theories of supernatural punishment. They also argue that theistic belief in itself provides survival benefits to the individual and groups. Both arguments are important to the case, but because of space constraints I will restrict myself to discussing the former from here onward – whether religion provides a plausible explanation for observed cooperation.

The Evidence

Johnson and Bering argue for theism as an explanation for cooperation by initially describing the extent to which cooperation is observed in humans and animals. They suggest that cooperation in animals is well explained by the four dominant theories – kin selection, reciprocal altruism, indirect reciprocity and costly signalling. However, they argue that humans are altruistic and cooperative to a greater extent than animals; to a degree that is insufficiently explained by these theories. We appear to continue to cooperate even when all these factors are absent; they cite laboratory studies which appear to demonstrate instances of this. They note that some progress has been made towards explaining this in terms of

group selection or 'faulty' psychology, but they propose that religion is the best explanation of this surplus cooperation.

The first point they offer as evidence towards this claim is an empirical one; they write that religion has historically been associated with higher levels of cooperation. I think they slightly oversell the level of evidence there actually is; they describe the point as 'intuitive' and say from the outset that it would be 'incredible' to think otherwise, although concede that many in the field do think this. They say that studies of communes and kibbutzim have shown a correlation between religiosity and cooperation, but the examples they cite do not prove this conclusively (although it may of course be true in any case). In the communes in particular, higher levels of religiosity led to longer survival. They appear to assume that this is because of cooperation, but this is hardly the only possible explanation. It could be, for example, that the more theologically devoted communes attracted more support (funding, for example) from church authorities, increasing their survival chances in this way. They are on stronger grounds with the kibbutzim however, as they describe the evidence. So we can say that they may well be correct that religiosity and cooperation are correlated, the correlation does not seem necessarily as strong as they imply, given the examples that they cite.

Having seemingly established a historical link, Johnson and Bering move on to provide an evolutionary reason why religion may have promoted cooperation. They first explain why a certain degree of punishment (as opposed to reward) is necessary for cooperation. Cooperation is presented almost as a Hobbesian problem – benefits to the group can be achieved through cooperation but without enforced punishment for defection rational actors will defect to avoid exploitation. This is because participating but being defected against carries a substantial cost, which defecting against a participator carries some benefit. Although simultaneous participation is the preferred outcome, to avoid being exploited a rational agent should defect. This is also known in game theory as the Prisoner's Dilemma. The Hobbesian solution to this problem – a sovereign or state which punishes defection and thus makes participation the rational option, has traditionally been discounted by anthropologists, as the state or similar external institutions are relatively recent inventions. However, Johnson and Bering seek to reinstate it through a previously unconsidered or discounted social institution – that of religion. Religion has been a consistent feature of human life for as long as we can tell, so perhaps provides a solution to the problem of cooperation.

Religious belief as a reason for cooperation avoids entirely the problem of defection. This is because it places a perceived cost on defection that is not itself subject to defection. Socially organised punishment appears to just regress the Prisoner's Dilemma in that rational actors will usually try to defect from punishment as well. Because of the omnipresence of supernatural agency, defectors will always perceive a cost, and so will not defect. Cooperation is thus efficiently achieved.

What are the weaknesses of this paper, and why is it important?

The strength of this argument is that it provides a neat solution for the problem of cooperation that does not appear to have any major flaws. The weakness, I think, is that Bering and Johnson oversell their conclusions somewhat, in terms of the importance of religion to cooperation as a whole.

Firstly, they make little attempt to compare their theory to other plausible theories, such as the evolutionarily novel nature of modern society. Because humans evolved for so long in smaller scale societies, much observed cooperation in cities of laboratories which does not appear to be a result of reciprocal altruism (or the three other explanations mentioned

previously) could simply be a misfiring of these previously selected for behaviours. They do mention this as an explanation briefly, but unfortunately offer no visible argument as to why it is inadequate, or less adequate than their own theory.

They also concede an important point – that cooperation is prevalent among atheists as well even if is, as they say, less than that of believers. What would make their case stronger would be an attempt to quantify any difference in cooperation and compare this with the expected levels of cooperation generated by fear of a supernatural agency. This point and the one mentioned above offer tentative reasons as to why we should not necessarily believe that Johnson and Bering have conclusively solved the problem of cooperation.

Johnson and Bering's paper is thought-provoking and interesting. It offers a solid argument for the thesis I have discussed here, buttressed by reasonably solid evidence. Its main weakness is an attempt perhaps to oversell its solution as of more importance to the evolution of cooperation than it actually may be, and in doing so shows a slight failure to deal with all the relevant competing theories. However, it must not be underestimated as a powerful explanation for the existence cooperation in human society.