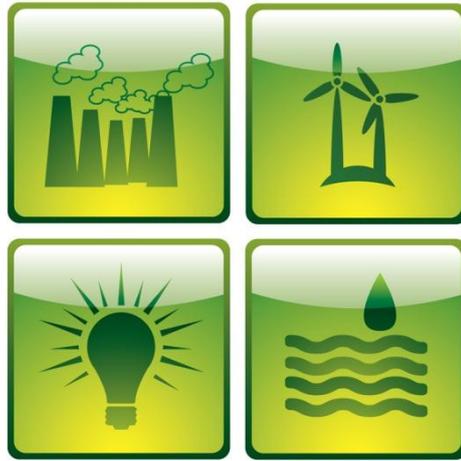




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# E-Futures

## Mini-Project Report

### Faith Groups and Risk Perception: A Study Exploring Attitudes to Environmental Issues and Energy Technologies

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## Abstract

The research used theories of Risk Perception to explore the ways in which religion may influence attitudes to environmental issues, focusing in particular on climate change. The study also looked at perceptions of emerging technologies aimed at addressing the carbon intensity of our energy production, looking at Carbon Capture and Storage (CCS) in particular. Mixed methods were used, including focus groups and a questionnaire, both based on Dunlap and Jones (2000) New Ecological Paradigm Scale. The study found that while religion promoted pro-environmental attitudes; beliefs in a deity with the capacity to intervene in the human situation and in an afterlife reduced feelings of urgency in assessing risks. Future research should explore the interaction between personality factors, religious values and environmental issues.

## Study Context: Religion and Environmentalism

Despite the growing body of environmental policies, targets, campaigns and a corresponding increase in public awareness of serious environmental issues, such as climate change, public behaviour appears slow to change (Leiserowitz 2005 and Neimer, Petts and Hobson 2005). This has fuelled research into the factors which shape environmental attitudes and produce environmentalism; the propensity to take actions with a pro-environmental intent (Dunlap et.al. 2000, Stern 2000:411, Schwartz 1994). Studies seeking to clarify the relationship between perceptions of environment issues and more sustainable behaviours have focused in turn on the effects of personal background factors (Dunlap et.al. 2000), risk perception (Leiserowitz 2005, Niemeyer, Petts and Hobson 2005 and Slovic et. al. 2004, 2007) and value, attitude and behaviour formation (Schwartz 1994, Stern et. al. 1995, Dietz, Gregory and Guagnano 1998). Studies focusing on social factors have found that environmental concern is higher among women; individuals with liberal religious and political affiliations and in younger members of society (Dietz Stern and Guagnano 1998). Environmentalism is more evident in secular members of society (Eckberg and Blocker 1989:516) but lower among Western Christian groups (Whitford and Wong 2009).

The role of religion in shaping values and forming environmental behaviours has been subject to considerable debate. Values are important because they act as relatively stable guiding principles over the course of a lifetime; with even highly educated individuals appearing to be predisposed by their cultural values to either accept or dismiss the existence of issues like climate change (Slovic et. al. 2011). With 2.1 billion Christians and 1.5 billion Muslims worldwide as well a significant communities within the UK, it is important to understand how the cultural values and attitudes of these faith groups may influence perceptions of environmental issues and energy technologies. The current debate on religion and environmentalism was ignited by White's (1967) thesis. White focused on church traditions which placed emphasis on Genesis 1:28, arguing that Christianity promoted the domination and exploitation of the environment. However, White's thesis has been subject to considerable criticism because of its simplistic and broad generalisations and lack of attention to counter traditions promoting stewardship (Sherkat and Ellison 2007). The majority of studies have focused on the West, and in particular America, meaning that we have a more limited understanding of the relationship between Islam and environmentalism (Whitford and Wong 2009). However, studies indicate that Islam is likely to promote pro-environmental attitudes because of its "harmony" values (Whitford and Wong 2009). Guth, Green and Smidt (1995) argue that further research needs to be conducted into which aspects of religion influence environmentalism.

**Hypothesis:** Secular students were expected to demonstrate the strongest pro-environmental attitudes because they do not subscribe to beliefs in an afterlife, increasing their focus on current issues. Muslim participants were expected to have pro-environmental attitudes because of harmony values promoted by Islam. Christians were expected to be ambivalent to environmental issues because of conflicting traditions of mastery and stewardship values.

## Method

A mixed methods approach was employed to explore attitudes to environmental issues. In-depth focus group discussions were based on five themes from Dunlap and Jones' (2000) New Ecological Paradigm Scale (NEP), while the questionnaire used the full 15 point likert scale. The NEP has been used as a reliable and scientific method for measuring emerging pro-environmental beliefs (Hawcroft et.al. 2010). The NEP tests for ecocentric and anthropocentric beliefs about the value of nature and the relationship between humans and the environment and explores beliefs about population growth and ecological catastrophes, such as climate change. The research also explored attitudes to Carbon Capture and Storage (CCS). Participants were presented with a basic explanation of CCS and asked to make value judgements based on their initial impressions of the technology. Three focus groups were held. Participants included 4 Protestant Christians, 10 Sunni

Muslims and 6 secular students. Participants were all connected with The University of Sheffield and were through society email addresses, the Multifaith Chaplaincy and the Muslim Welfare House.

## Key Findings and Discussion

### MEASURING ANTI-ANTHROPOCENTRIC VALUES: BELIEFS ABOUT OUR RELATIONSHIP WITH THE ENVIRONMENT

Religion influenced perceptions about the relationship between humans and the environment. Christians and Muslims believed humans had a God-given role as “guardians” or “vicegerents”, with responsibility for creation-care. The Christians focused on Gen. 2:15 commenting that environmental guardianship was “not quite a right to rule” but a “unique responsibility”. Similarly, Muslims emphasised Chapter 2.28 of the Qur’an, explaining that: “it is HE who created everything for you’ ... so the fact is that everyone has a responsibility for the gifts and the way that they are used”. Scriptures which promoted harmony values and environmental stewardship were highlighted. Secular participants had a contrasting worldview, seeing the relationship between humans and the environment in evolutionary terms and rejecting beliefs in divine creation. They argued that “rights” were societal constructs: “we have to modify the environment in order to live but it’s not a ‘right’ [...] we are animals like everything else”. All three groups understood humans to be part of nature but argued that human capacity for reason and organisation entailed responsibility for the welfare of other species.

Religion also influenced the participants’ motivations for environmental responsibility. Muslim participants saw their duties as a written ethical code in the Qur’an, speaking about scriptural unity and responsibility principles. It was observed that the responsibility: “goes back to the fact our Lord is always watching [...] you have that responsibility and you will be asked about it”. Muslims believed they would be judged by Allah on their treatment of his creation. Christian argued that environmental quality was important because it promoted human welfare, focusing on the commandment to “Love Thy Neighbour”. This gave them a more anthropocentric emphasis. The secular group took their precedent for environmental care from the fact that humans could reflect upon and regulate their behaviour.

### LIMITS TO GROWTH

When limits to human population growth were discussed, there was a tension for Muslims and Christians who believed that large families were a blessing, because this appeared to conflict with their duty for environmental stewardship. Some Muslim participants did not perceive any risk from the need to provide for a growing global population because they believed in predestination: “Everything that happens is written thousands of years ago by God [...] HE is in control of the size of society and who lives and dies and when”. Another member returned to the theme of human responsibility and the unique capacity of humans for reason, making the point that people would be still held accountable for not living within their means: “Islam also teaches that you should use your mind [...] so again you can’t have a lot of children and just trust in God and do whatever you want ... you’ve got to live within your situation”. This indicates a practical theological stance: humans after doing their best can trust in God for the rest. Religion, therefore, appeared to influence risk perception — for religious participants there was an assurance that after they had done their best, they could rely on God.

The absence of belief in a benevolent deity with the capacity to intervene in the human situation, gave the secular discussion a far greater sense of urgency. This was reflected in their language, with words such as “collapse”, “crash” and “peak” frequently occurring. While the religious participants spoke about eternity and the redeeming of creation at the end of time; secular participants focused on human self-regulation and environmental risks likely to occur within the next 50 to 200 years. For secular participants, humans were solely responsible for their own fate and emphasis was placed on immediate action.

### ECO-CRISIS

Some studies have claimed that religious groups, especially American Christians are disengaged with current environmental issues such as climate change because they are focused on other-worldly or end-times thinking (Eckberg and Blocker 1989). However, Christian participants dismissed apocalyptic interpretations of the Bible arguing that there was a danger of quote mining verses and not looking at texts within their historical context. They argued that broad biblical principles should be applied, such as the idea of humans as co-creators with God working to redeem nature, and promoting human and environmental welfare. There were a range of views on climate change, its causes and possible effects. Participants felt uninformed and were concerned about misinformation. Despite this they emphasised that Christians did have a role to play in addressing environmental issues and argued that the church should be assisting

Christians in being at the “forefront of these things”. The fact that the group felt unfamiliar with climate change risks may suggest a lower level of engagement with these issues.

Secular participants held a range of opinions on eco-crisis. The discussion centred on values and whether human life and technological advancement were of greater value than eco-systems as they exist today. The predominant feeling was that other species would continue to exist, but humans would risk extinction with rapid or severe climatic change. The range of possible consequences and uncertainty concerning timeframes are exemplified in this comment: “If we are unable to work together to tackle climate change and grow crops without fossil fuels [...] If we have peak oil in 30 years [...] it is possible that we will miss the three degrees [...] there will be droughts”. The group reached consensus on the existence of climate change but disagreed about timeframes.

Muslims framed their response using the concepts of unity, respect and balance: “...we have unbalanced the whole thing and we are part of that balance but we have created disequilibrium”. Participants commented that regardless of negative consequences on humans, damaging the environment was morally wrong. The number of international students shaped the discussion on climate change because they argued that they had witnessed its effects in the changing weather patterns of their home countries. Some participants were dubious that climate change was anthropogenic, but the majority felt that humans were undoubtedly “accelerating the speed” of any natural changes. The group accepted that humans could cause large-scale environmental damage and that the consequences would be felt by all species.

### CARBON CAPTURE AND STORAGE (CCS)

CCS received mixed approval. Acceptance of the technology was reliant on a number of factors including, belief in anthropogenic climate change, perceptions of whether the risk was serious for society and the environment, and finally, acceptance of the need to reduce CO<sub>2</sub> emissions drastically (60%) over the next 50 years (Shackley, McLachlan and Gough 2005). There was general acceptance that climate change was occurring and questionnaire data revealed that the majority of participants believed human activity was partly responsible. Risk perception varied across the groups, with the secular participants demonstrating the highest levels of concern and the Christians the least.

Both secular and Muslim participants used ‘risk compensation’ arguments, stating that if the carbon intensity of energy production was decreased by CCS, the incentive to reduce consumption and adopt more sustainable lifestyles would also decline (Shackley, McLachlan and Gough 2005). One Muslim participant commented that CCS could be “used as an excuse to create more emissions”, while secular participants spoke about CCS as a “conscience cleaner”. Instead, both groups favoured behavioural change and renewable technologies. CCS was viewed as a method for treating the symptoms of dependency on fossil fuels, rather than providing an alternative, cleaner fuel. “It’s not a solution. We produce it and we deal with it. How can we avoid emitting it?” one Muslim participant asked.

Muslims acknowledged that humans were causing a range of environmental issues and disrupting natural systems. However, they were uncomfortable with the idea of storing CO<sub>2</sub>. The negative perception of CCS stemmed from their focus on harmony and balance principles and their responsibility to act as stewards, protecting creation for future generations: “each generation has their own challenges but we should give them the earth in the best shape [...]we should minimise any effect which could last for long”. The group considered the continuing burning of fossil fuels, high consumption and the burying of unwanted emissions to be irresponsible.

While the secular group expressed concerns that CCS would be seen as a “quick fix”, removing emphasis on behavioural change, they conceded that the risk of climate change required rapid decarbonisation of the economy and multiple solutions. One participant argued that: “CCS is an important part of the solution ... I don’t think it’s a waste of money ... we need to start decarbonising the economy incredibly quickly in order to have a chance of not reaching three degrees by 2100”. They saw behavioural change, nuclear and cleaner fossil fuel technologies as all having a role to play in addressing climate change. However, they also reasoned that CO<sub>2</sub> was only one pollutant out of many waste streams that needed to be addressed: “CO<sub>2</sub> is a small drop in the ocean compared to all the other effects that we are having ... so if you just concentrate on that you miss 90% of all the other problems”.

The Christian group acknowledged that meeting current energy demands using renewable technologies would be problematic and potentially economically damaging and expressed concerns at the long-term safety of CO<sub>2</sub> storage. The group did not feel that they could assess the CCS technology or possible ethical issues because they were uncertain about

risks related to climate change. However, the group was generally optimistic that energy technologies would continue to improve, becoming cleaner and more efficient and helping to improve environmental conditions and human welfare.

## Conclusion

The data supported the hypothesis that secular individuals would have the highest NEP score, demonstrating the strongest pro-environmental attitudes, followed by Muslims. All participants attained above average NEP scores. Muslim participants professed a theocentric environmentalism based on their beliefs that environmental stewardship was a God-given responsibility. Muslims also demonstrated ecocentric beliefs, arguing that abuse of the environment was immoral, regardless of whether humans were affected. Christian motivations for environmental stewardship had a greater anthropocentric emphasis. They argued that good environmental quality fostered human wellbeing and as a result could be seen as fulfilling the commandment to "Love Thy Neighbour". The majority of participants from the three groups subscribed to anthropogenic climate change and believed humans should be responsible for caring for the environment because of their capacity for reasoned action. The discussion on limits to population growth created tensions for religious participants who subscribed to traditional teachings encouraging large families because this appeared to conflict with their duty for environmental stewardship. For Muslims and Christians, faith promoted pro-environmental attitudes, but faith also appeared to reduce perceptions of risk and urgency. Religious participants spoke about divine intervention and eternal life and argued that after doing their best they could put their trust in God. Secular participants had the highest perceptions of risk and believed climate change was high risk and required immediate action. They saw humans as solely responsible for the consequences of their actions, and as a result were the most willing to accept multiple solutions to address climate change, including CCS. Muslims saw CCS as conflicting with harmony and stewardship values.

## Further Research

This project highlighted a number of areas for further research including the interaction of personality factors such as optimism and pessimism with religious values and environmental issues. The factors which lead people to choose between different or conflicting passages of scripture (e.g. Gen. 1:28 over Gen.2:15) to illustrate their points, should also be investigated. Further research should consider the extent to which the drive to protect the environment among religious people is an indirect outcome of a desire to be judged favourable, versus, direct pro-environmentalism for the sake of the environment. Finally, consideration should be given to the extent to which perceived timelines of existence, including beliefs in an afterlife, influence the perceived urgency of taking action on environmental issues.

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