

Why Does Jesus Go to Oxford University? Conversion Experience, Creativity and Intelligence

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Abstract

This aim of this article is cast a neuroscientific light on recent research into student evangelicalism. The article will draw upon findings which indicate that universities which are particularly transitional and prestigious tend to have (in contrast to less transitional universities), tightly differentiated and 'fundamentalist' student evangelical groups and higher levels of conversion while at university. While accepting the influence of this environment in pressuring students (a significant factor in conversion), this article will suggest that students' intelligence and creativity is also a significant factor. Following the neuroscientific research of Persinger and others, it will argue that Oxford University students are likely to be not just more intelligent in IQ terms than comparable students but more creative, more original in their thinking and more able to acquire knowledge. These characteristics will all be shown, drawing upon neuroscientific data, to make religious experience more likely in an individual.

Keywords: Religious Conversion, Evangelical Students, University, Intelligence, Creativity.

1. Introduction

There is an increasing body of fieldwork research with student evangelicals which appears to point to the conclusion that student evangelical groups at the more prestigious universities tend to be, comparatively, more highly structured in terms of belief and behaviour, more successful in gaining converts and have more members who have undergone

“conversion” while at university (see, for example, Dutton 2008, Moran 2007, Magolda and Ebben 2006, Bryant 2005, Bramadat 2000, Hammond and Hunter 1984). The mainly anthropological and sociological research which has looked at this to date has tended to conclude that this higher level of differentiation and conversion can be substantially explained by the structures of the universities themselves (e.g. Dutton 2008, Hunter and Hammond 1984). In various ways which we will touch on below, they are more “luminal” (see Turner 1969): they create a transitional phase, challenge the worldview (whether Christian or not) of the student and thus push the student towards a ‘fundamentalist’ group which offers a tight world-view. (I use the word ‘fundamentalist’ in line with Barr (1977), Armstrong (2001) and Bruce (2002) who all characterise it as a process whereby groups who feel that their identity is threatened will turn in on themselves and produce a more strongly differentiated identity as a bulwark against outsiders. Wilson (1970) observes that there are various kinds of ‘fundamentalist’ new religious movement. Some are evangelical, others are “introversionist” and there are a number of other categories which he examines.) Accordingly, the student may undergo distress which makes a religious experience of some kind more likely (see, for example, Rambo 1993). The aim of this article will be to dissect these findings – and push them further – in light of quantitative neuro-scientific research on the causes of religious experience, the development of tightly structured world-views and the nature of intelligence itself. Accordingly, the article will exploit – in an entirely new way – a body of information on religious experience in order to understand these anthropological findings in greater depth.

Drawing upon the data, the article will suggest what it sees as a plausible explanation. In summary, it will argue that students at universities such as Oxford are, in many cases, placed under intense psychological pressure which, biologically, makes religious experience more likely as we will see below. However, this likelihood is augmented even further by the high level of intelligence found among these students. The article will argue that a by-product of particularly high intelligence (as manifested not merely in high IQ but in an

ability to solve problems creatively, learn from experience, remember in detail and other factors) is a far greater likelihood to perceive a sense of agency in the world – something which we will understand to be the essence of religious experience. (Drawing upon Boyer (2001), I use “religious experience” in the broadest sense here to mean any experience in which the person undergoing apprehends a sense of presence.) So, precisely because Oxford students are highly intelligent, they are more likely to undergo religious experiences and this is augmented by the liminality-creating structures of the university. Some evangelical clerics such as Tinker (2009) have suggested that the talents of Oxford University students would explain the high levels of conversion. Basically, the evangelical students are highly able (intelligent and creative) and thus more able to successfully evangelise. However, this still raises the question of why they would be more evangelical (which makes sense in terms of the liminality of the university as we will see) and what high intelligence would have to do with an ability to induce conversion experience. I will suggest in this article that intelligence and creativity are factors but they go beyond simply an ability to present evangelical Christianity in a persuasive way.

2. Philosophical Issues and Key Questions

There is an extent to which this examination is a form of scientific speculation. It is based on what Wilson (1998, 9) calls the „metaphysical view” that all of the branches of science can be united under the hard sciences the proof of which is the continuous success of those sciences. This stands in contrast to scientists who believe in different (unbridgeable) domains with science covering the empirical universe but having no bearing on issues such as morality and meaning. It is my view that scientists in this latter category are effectively unscientific because they wish to protect certain areas of life from scientific analysis. These are “beyond science” just as the origins of humanity were formerly understood to be. This view expresses itself in an unreachable demand for methodological perfection regarding certain protected areas, such as human

population genetics, in which inductive reasoning is condemned as “bad science” thus condemning any attempt to move beyond current knowledge based on evidence. This does not manifest itself in other areas (see Segerstråle 2000, Ch. 20). This has been summarised elsewhere as a de facto “deification of humanity” (see Dutton 2009, Ch. 2).

It has been widely pointed-out (see for example Wilson 1998) that much of social anthropological research is ultimately question-begging if it presents conclusions about human behaviour without taking into account the biological mechanisms which underpin that behaviour. This has evoked a stormy debate in anthropology. In particular, the Mead-Freeman controversy centred around Derek Freeman’s (1983) refutation of Margaret Mead’s fieldwork in Samoa (Mead 1928) and consequent refutation of cultural determinism in favour of a synthesis between cultural anthropology and biology. There remains an influential school in contemporary anthropology which, in effect, rejects the view that biology can cast any understanding on group behaviour, though this is increasingly a marginal view. Thus, this article will bring together these neuroscientific examinations with the body of anthropological fieldwork in order to comprehend why students at universities such as Oxford appear more prone to conversion experience than in other institutions. As such, it will provide a compelling case.

The case would be more compelling if it were possible to conduct intelligence and creativity tests (such as the Multiple Uses Test) and related assessments of religious experience with members of the student Christian Union’s at Oxford University and Aberdeen University, fieldwork at which we will draw upon. Unfortunately – though initially interested – neither group were ultimately conducive to doing this. Participant observation fieldwork was welcomed – with varying degrees of enthusiasm – but it seems that such tests were deemed too intrusive and the groups’ executive committees would not allow it. That said, we can still provide a persuasive case with the evidence already accrued.

3. Research on Student Evangelical Groups

Before examining any of the data from neuroscience or any of the questions surrounding concepts such as intelligence, I think it would be useful – at the outset – to summarise the social scientific findings on university evangelical groups. Most recently, I have compared four student evangelical groups and drawn upon other research to examine yet more. Oxford University's dominant evangelical group OICCU (Oxford Inter-Collegiate Christian Union) is extremely highly structured in terms of differentiated belief and behaviour. Drawing upon 25 interviews (about a quarter of the membership), it was not only found that members must sign a "Declaration of Faith" but that: "All of those to whom I spoke claimed to believe in the Devil as an actual force in the world. Twenty four out of twenty five in OICCU rejected Evolutionary Theory and all believed in the reality of doctrines such as the resurrection. The numbers who had undergone a conversion experience were very high . . . In OICCU only one person from the sample claimed to have never had a conversion experience . . . In OICCU, all thought it was acceptable for Christians to drink but none to become drunk. Only one felt it was acceptable for Christians to smoke, only one felt it was acceptable to date a 'Non-Christian' and none felt it acceptable to take drugs of any kind in a university context where drug experimentation was not uncommon. All felt premarital sex was unacceptable and that homosexuality was unacceptable. The issue of swearing will be discussed below but members, in general, were not prepared to swear, at least not conventionally" (Dutton 2008). AUCU (Aberdeen University Christian Union) is somewhat different. Though there is a "Declaration of Faith" to be signed, students are less counter-cultural. "All those whom I interviewed from AUCU claimed to believe in Hell and to believe that Non-Christians would go to Hell. All of those to whom I spoke claimed to believe in the Devil as an actual force in the world. Twenty three in AUCU rejected Evolutionary Theory, which was marginally fewer than OICCU. Moreover, those that did reject the theory tended to be somewhat more unsure about doing so than many OICCU members were. They might begin by saying, 'Oh, that's a difficult question' or 'I'm not quite sure about that'. All AUCU members believed in the reality of doctrines such as the Resurrection. Of the twenty-five AUCU members interviewed, five admitted that they had never had a conversion experience but had simply always been Christians meaning that somewhat fewer had undergone conversion experiences than amongst OICCU members. As will be noted below, very few AUCU members had become Christians while at Aberdeen University. I also noted conformity in terms of social belief. In AUCU all felt it was unacceptable to have sex before marriage and all said that

they would not do so. All but one felt that homosexual behaviour was unacceptable. Also, all felt it was unacceptable for Christians to become drunk. However, unlike in OICCU a handful - two - felt it was acceptable for Christians to smoke and two would be prepared to date a Non-Christian with a few others ambiguous about this". This difference is even more pronounced at Oulu University in Finland in which the main student evangelical group has a very low level of differentiation. Unlike in the other two groups, attendance at OKO's (*Oulun kristittu opiskelijat*) was very fluid with only around five or so people who attended every week. They seemed to form a core membership and were relatively differentiated in their beliefs, certainly to the extent of AUCU. The core was female, from religious backgrounds and around nineteen years-old. The majority - attending erratically - were older (up to 27), mixed in terms of gender and religiously and ethically relatively liberal, often having been more "fundamentalist" (that is to say "religiously conservative") when they were younger.

The issue of conversion experience parallels these findings in a thought-provoking way. OICCU has the highest level of conversion. "Of my sample, twenty percent of OICCU claimed to be from Non-Christian backgrounds while twenty-four percent had become Christian while at university . . . Members from 'Non-Christian backgrounds' had, in fact, been baptised and in some cases their parents attended Anglican churches weekly. It is thus evidence of the liminality of Oxford that these students retrospectively concluded that their parents were not real 'Christians' and they had, in fact, not been raised as Christian. Indeed a minority of the converts had been raised as evangelical Christians and had regarded themselves as 'Christian' until they became involved in OICCU, realised that they were not 'Christian' and underwent a conversion sometimes even 'realising' that what they previously understood to be their conversion, when they were a teenager for example, was either not really a conversion or that they had 'back-slided' from it since¹. This would all seem to testify to the liminality of Oxford University . . . Moreover, students from state schools where over-represented amongst those who became Christians while at

¹ Words such as 'back-slided' are of great interest in understanding evangelical groups. I found that OICCU, to a greater extent than the groups to which I compared it, used a group 'restricted code' which is often a sign of a tightly structured and differentiated organisation (see Douglas 1996 for discussion of restricted code). Bramadat (2000) recalls his evangelical student informants being quite aware of their restricted code and referring to it as 'Christianese'.

Oxford. All but one of those who had converted at Oxford had been to state schools and none of them had been on Gap Years.' (It is increasingly popular for British students to take a "Gap Year" prior to beginning their degree. This is normally a year abroad in which students engage in some form of charity work. It is considerably more popular amongst British students from private schools and I would constitute, I would argue, a liminal phase which would thus render university less liminal. See Jones (2004) for a discussion of the Gap Year in the UK.) At Aberdeen University, only eight percent had converted while at university while at Oulu University, nobody had.

These findings in terms of the "Rite of Passage" model and, indeed, they tie in with other similar research as we will see momentarily². Turner (1969) highlights the "status elevation" Rite of Passage whereby young men are taken away from the tribe to undergo a "liminal" (transitional) phase. Upon completing this arduous and violent initiation process, they return to the tribe as men. University, to varying degrees dependent on the kind of university and the kind of student, is likewise a "Rite of Passage", something explored in detail by many scholars (see Morris 1969, 273). It can be argued that Oxford University is a particularly intense Rite of Passage. The students are from all around England and from diverse social and religious backgrounds meaning that very different people will meet. Students live in college on corridors creating intimate and intense relations with people from very different backgrounds. Academic pressure is extremely intense – there are two essays a week, one-on-two tutorials and all the exams are at the end of the degree, never to be retaken. There are numerous compulsory university rituals, taken in special dress, which grind down individuality. It is also a highly prestigious university, particularly likely to raise the status of undergraduates from less educated or wealthy backgrounds. It thus exerts a high level of psychological pressure which would explain high levels of conversion, the attractiveness of a differentiated group and, for Christian students, why that

² I appreciate that Turner's functionalism might be regarded as slightly dated and accordingly I intend to move beyond it in this article while employing it where it is useful.

group is structured: their faith is under assault so it is bolstered against outsiders³. Aberdeen University is a far less intense Rite of Passage – the social differences are not as large, academic pressure is far lower, status gain is also far lower. And Oulu University is really like a job. Many students are local and live at home. They might not start the degree until they are 21, finishing six years later, almost all the men have already done military service – an intense Rite of Passage in itself. Thus, the differences in liminality appear to be a plausible explanation.

This is substantiated by quantitative research into American universities. Philip Hammond and James Davison Hunter (1984) conducted a detailed sociological examination of student evangelicals at a variety of American higher education institutions in the early 1980s. Employing the survey method, their research involved over 2000 evangelical students spread over Wheaton College in Illinois, Gordon College in Massachusetts, Westmont College in California, Bethel College in Minnesota, Houghton College in New York, Seattle-Pacific University in Washington State, Taylor University in Indiana, Messiah College in Pennsylvania and George Fox College in Oregon. With the assistance of other sociologists, Hammond and Hunter drew up a sample from each college stratified in terms of social class. They then sent out detailed questionnaires to the evangelical students which included members of Campus Crusade for Christ and the Inter-Varsity Christian Fellowship. The highest response rate was seventy-four percent from Westmont and the lowest was sixty-three per cent from Gordon (Hammond and Hunter 1984, 223). A further institution was drawn upon at this stage for comparative purposes – the University of California at Santa Barbara. The institutions examined ranged from public, research intensive universities and private liberal arts colleges through to evangelical Christian “Bible Colleges”. Some of these Christian colleges allowed members who were not necessarily evangelicals to attend while others were strict in

³ See Fisher (1994) or Kingsbury (1974) for a broader discussion of the stresses caused by British campus universities. Also, Turner (1982, 65) notes that the liminal phase in ‘psychologically difficult.’

ensuring that any potential student must be an evangelical Christian. Hammond and Hunter find that evangelical students on secular campuses have more difficulty holding onto their religious beliefs than those on either moderately or highly evangelical campuses. “The secular campus is no doubt a threat to the evangelical world-view, but it is also a trial by fire, so to speak, and thus an annealer of the world-view” (229). In other words, on the insular and relatively insular “Christian” campuses, the world-view of student evangelicals often seems to develop in a somewhat more liberal direction than the view held when they began their studies. As Hammond and Hunter put it: “In one sense this is exactly what we would expect from increased education” (230). There is a kind of “falling away” from evangelicalism. In stark contrast, they observe that, “On the secular campus, the evangelical worldview of evangelical students seems to gain solidity . . . there is a consolidation of beliefs and practices” (230). Hammond and Hunter explain this reaction by arguing that the secular campus can act as a kind of assault on evangelical identity which leads to the forming of highly evangelical groups. Indeed they imply that the secular campus can be understood as a general assault on identity as their statistics suggest that many evangelical students on secular campuses may have converted while at university in disproportionately high numbers (231). Evangelical student groups are, they note, far less required on campuses where everybody is assumed to be Christian anyway (232). As discussed above, what I want to do in the remainder of this article is push these findings further. They imply, on the surface, that any student for whom a situation is especially liminal may be likely to have a religious experience. I will argue – while appreciating that further research is needed – that there is much more to this. In essence, highly intelligent students will be much more prone to such experiences⁴.

⁴ In addition, we have already cited assorted scholars whose fieldwork adds credence to these interpretations to some extent. There is also what we might call academic anecdotal evidence. Coleman (2000, Ch. 1) discusses CICCUC (Cambridge Inter-Collegiate Christian Union) and Dutton (2008, Ch. 1) discusses DICCUC (Durham Inter-Collegiate Christian Union). Both are very similar universities to Oxford (especially Cambridge) and in both cases the groups appear to be similar to OICCU.

4. Intelligence and Evolution

What do we mean by intelligence? This is an emotive debate and the concept of intelligence is often the subject of essentialist criticisms which are not raised regarding less “political” concepts. I am not going to, therefore, deal with essentialist criticisms of intelligence – which could be directed at any category from “religion” to “island” – here⁵. Such criticisms aside, Lynn (2006, 3) observes that: “There is widespread consensus that intelligence is a unitary construct that determines the efficiency of problem solving, learning and remembering”. Gottfredson (1997, 13) provides a useful definition which was endorsed by 52 leading experts and published in the *Wall Street Journal*: “Intelligence is a very general mental capacity which, among other things, involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience”. This includes what Gottfredson calls “book learning, a narrow academic skill, or test taking smarts” but also a broader ability to “figure things out”. Accordingly, we must make a distinction between ‘IQ’ and other forms of intelligence. IQ relates to the ability to reason and solve problems and notably abstract problems. However, it does not necessarily relate to intellectual creativity, the ability to make broad sense of affairs or the ability to learn from experience. In defending the concept of IQ (Intelligence Quotient), Rushton (2000, 22) writes that IQ is employed “to measure intelligence or mental ability. Brighter people, as measured in their output to society, score higher on IQ tests than most people. Less bright people score lower. IQ is not perfect but it is useful and can tell us a lot” – in particular it is a good broad predictor of the education level a person will achieve and the kind of job they will pursue. Likewise, Lynn (2006, 4) accepts that there are difficulties with IQ as a predictor but that IQ scores are an “approximate measure” of intelligence as defined by a high ability in verbal and non-verbal reasoning, memory and visualisation. As students at Oxford and Cambridge are highly

⁵ For a refutation of critics of essentialism on any topic see Dennett (1995, Ch. 3, Part 5) and on religion see Saler (2008). However, for a detailed criticism of the usefulness of IQ – and advocacy of a more multifaceted view of intelligence – see Murdoch (2007).

intelligent we would expect them to have very high IQs (though an IQ test is not part of entrance exam into these universities). However, as we will see below, we might also expect them to be highly creative in their thinking and though this relates to IQ to some extent (because it relates to ability in abstract thought) it is not inextricably related to it. A highly intelligent individual could nevertheless be unoriginal in their thinking, a point which has been observed by Lynn (2006). Research on the IQ of Cambridge University students (Mascie-Taylor et al 1983) found very substantial differences in the IQ amongst students at this university, which is accepted as being on a par with Oxford academically. Students in the hard sciences had higher IQs, on average, than those who studied social sciences or humanities. Thus, it appears that there is more to being a successful student in the humanities (sufficiently successful to gain entrance to an elite university such as Cambridge) than simply a relatively high IQ, important as this may be. Indeed, in his analysis of creativity, Hans Eysenck (1994, 64) notes that creative people possess a higher level of “P” or “psychoticism”. However, this is not unrelated to cognitive ability as measured by IQ. According to his tests, creative people have a high level of intelligence (even if they lack genius intelligence) but beyond an IQ of 120, creativity seems to be independent of IQ implying that personality factors are central. They score very highly on tests of fluency, divergent thinking and pronounced special abilities in a particular area of intelligence significantly over and above others. They may, for example, not score especially well in non-verbal reasoning but their verbal reasoning will be so extraordinarily good as to catapult them into the high intelligence range. Obviously, this is an extreme example. In particular, he finds that those with psychotic tendencies were more creative and could connect the seemingly unconnected in a way that a control group could only do to a lesser extent⁶.

⁶ Moreover, there has been a great deal of research demonstrating that people who are, in personality terms, extreme psychotics are highly prone to religious experiences. For a summary see Franks Davis (1989, esp. Ch. 8).

Gottfredson's definition is especially interesting in relation to his reference to abstract thought. This component reflects a very specific kind of intelligence (comparable to creativity) which is only found, at least according to current research, in humans (see Mithen 1996). Mithen (1996) examines how this kind of intelligence relates to "religion" and "religious experience". Many evolutionary psychologists have argued that human "understanding" is ultimately based around metaphor. Put simply, the human mind is divided into three "cognitive domains" – social, environmental knowledge and technical. The human mind is distinguished by an ability to apply one cognitive domain over to another – noted in the tendency to anthropomorphise nature and thus apply social knowledge to the environment. Whereas an ape, when he is concentrating on a technical task, can only perceive it in these focussed terms, a human is able to apply knowledge from the social realm and imagine what it is like to be a hammer. This is a crucial adaptation in terms of intelligence – it allows humans to imagine they were a pack of wolves (mixing social and environment) and attempt to second-guess what a wolf would do in certain circumstances. "Religion" is a by-product of this ability. It is using the social domain in an attempt to comprehend the environment. Pascal Boyer (2001) takes Mithen's findings to their logical conclusion. He argues that the essence of "religion" is perceiving a sense of agency in the world combined with a strength of feeling that the belief is accurate⁷. Humans are "hardwired" to perceive agency in the world and this is ultimately a by-product of a high level of creative intelligence. On the one hand, they have the ability to comprehend mixtures of cognitive domains. Humans have, "a variety of inference systems . . . The difference between early and modern humans is . . . in the possibility of using information from one domain in the course of activities monitored by another domain . . . transfers of information between domains is exactly what supernatural concepts require" (Boyer 2001, 372). Moreover, there are sound evolutionary reasons why humans would be hardwired to

⁷ Interestingly, this means that historicist ideologies – with their belief in the hidden hand of history – would fall under the category of religion. For an in depth analysis of religion as a category see Saler (1993). For a discussion of historicist ideologies see Popper (1957).

perceive these concepts, especially in situations of distress of the kind precipitated by an intense Rite of Passage. Justin Barrett (1996) provides a stimulating analysis of the relationship between religion and intelligence. As noted, humans can cross cognitive domains. However, they are also hardwired to always believe that an agent is behind any event. If they are unsure about a salient event, and under stress, they will perceive an agent. This is a useful adaptation because if we see a rock from a distance and assume it is a wild dog, if it is not then it doesn't matter and if it is we may have survived as a consequence of our early perception. Human ancestors had to deal with predators and prey and in both situations there is an advantage to over-detection. Humans have an agent inference system which is hyperactive. And it is for this reason that people might perceive agency in clouds or bizarre weather events. Ultimately, therefore, this "over-detection" is a matter of intelligence. It relates to the ability to think in a creative way, in the kind of way that solves problems which less intelligent animals would be unable to comprehend let alone solve. Though agency hyper-detection may not relate to human intelligence in itself it is a crucial component of an ability to make sense of the world in an abstract way and this is a central component of intelligence as we have defined it. As an aside at this point, Boyer also points out that human-beings – as pack animals – have evolved to be highly suggestible (or hypnotisable) which renders the perception of agency in the world more likely to occur when people are "hypnotized": in times of either extreme relaxation or great distress.

5. Intelligence and Religious Experience

We have observed a very broad relationship between intelligence and the ability to perceive agency in the world. But research in the field of neuroscience indicates that the relationship may be somewhat more specific. To put it very briefly, there is evidence that those who are highly intelligent are more likely to perceive a sense of agency in the world when under distress or extreme relaxation.

Michael Persinger's research is especially significant in this field. He observes that religious experiences occur due to

the stimulation of the temporal lobe area of the brain. Specifically, they are caused by “electrical microseizures within deep structures of the temporal lobe”. These microseizures are precipitated by stimulation of the “amygdale” area of the temporal lobe, which relates to strong emotions. The human brain is divided into four areas or lobes, symmetrical on each side: frontal, parietal, occipital and temporal. The temporal lobe is involved in auditory processing and the processing of speech and vision. It is also where the hippocampus is located. This plays a vital part in long term memory and spatial navigation. The amygdala is found deep within the temporal lobes. It plays a key part in processing memory and emotional reactions (see Turkington 1996 for more detail). Persinger (1983) found that life crises were “optimal” at stimulating the amygdala and in turn producing these microseizures. Persinger (1984a) produced a detailed statistical analysis of these results: “People who reported greater numbers of different types of paranormal experiences also reported greater numbers of temporal lobe signs”. A group of 108 university students (male and female) provided a correlation of 0.6. However, for the control group (of 41) there was a correlation of 0.72. This is used to demonstrate that religious experience is part of a continuum which includes temporal lobe conditions such as epilepsy which result in high levels of religious experience. However, Persinger also points out another consequence of this research. “We have found a moderate strength (about 0.6) positive correlation over about thirty years of data collection between experiences consistent with elevated electrical sensitivity in the temporal lobes (particularly in the right hemisphere) and the propensity for mystical and conversion experiences. The temporal lobe scales are also correlated moderately with indicators of creativity, imagination, memory capacity and suggestibility” (Personal Correspondence, July 2009)⁸.

If we apply this research to the information on the student evangelical groups, it suggests some fascinating possibilities. University students are more intelligent than the average

⁸ Persinger’s research is often emotively branded ‘controversial’ in the media. While it has been criticised, other scholars in this area such V. S. Ramachandran have conducted similar experiments and found similar results. For a useful summary see the final chapter of Andresen (2001).

population of the country in which the university is situated, usually by at least thirty IQ points in the case of respected universities and highly academic subjects (see Rushton 2000). Accordingly, we might suggest that the high level of intelligence amongst Oxford University students (or, more specifically, a high IQ) may be coupled with a higher than average level of “creativity”⁹. This would, as it were, provide them with an “intellectual edge” in terms of original thinking and would be a significant factor behind the high levels of conversion experience which appear to occur there. The university’s highly liminal nature places the student (or at least students for whom it is highly liminal) under considerable psychological distress. OICCU itself, by exposing their worldview to question, would also play a part in this. This would lead to a rise in the level of adrenaline in the student – placing him on flight, fight or fright footing – which would in turn make it more likely that he would perceive agency in the world in certain circumstances. However, this psychological pressure would be even greater (it might be suggested) for an intelligent (in the broad sense) individual – the kind of person who would most likely go to Oxford University. In another report in this area, Persinger (1984b) administered a survey to two groups of male and female university students. He found that people who reported religious experiences in this survey were more likely to enjoy reading and creative writing. Again, this implicitly relates to intelligence, albeit to verbal rather than non-verbal intelligence but the former is still a crucial component of intelligence as we have defined it. In understanding the difference between Oxford University and Aberdeen University in terms of conversion, “intelligence” may, therefore, be a factor. Oxford University students are amongst the most intelligent in Britain. It is intensely difficult to get into the university. In 2002, the typical A-Level offer was AAA (that is the top grade attainable in the three subjects taken as part of

⁹ The high creative output of Oxbridge (Oxford and Cambridge) students in purely artistic terms has been widely remarked upon, even since higher education in England has expanded throughout the twentieth century. See, for example, Chainey (1995).

the two year-long school leavers' certificate). About fifteen percent of A-Level students attained these grades but it was only a tiny minority of these who were accepted into Oxford after a rigorous interview process involving university-run exams in the case of some subjects. Oxford and Cambridge rejects tend to go to certain respected universities such as Durham and Bristol. However, many English students at Aberdeen are rejected from these universities. Scottish students (the overwhelming majority) have sometimes been rejected from Edinburgh or Glasgow (see Dutton 2008). Accordingly, the possible lower level of intelligence amongst these students – taken together with the university's lower psychological intensity for many students – may help to explain the relative lack of conversion¹⁰.

Importantly, there is evidence, according to cutting-edge psychological research, of a relationship between what we might call “hypnotisability” (something which can induce temporal lobe stimulation, religious experiences and commitment to highly organised groups) and a high level of various components of intelligence. Spiegel and Spiegel (2004) refer to the “Grade 5 individual”. He makes-up about ten percent of the population and is highly vulnerable to hypnosis. Though more inclined to feeling than reasoning, a Grade 5 is of considerable intelligence. He can focus and concentrate to quite an extraordinary degree to the extent that he can become “a victim of this capacity” because he can so easily be hypnotised, the essence of which is intense concentration. This means that he can easily “dissociate” (that is to say, disrupt the normal integration of his consciousness) and is accordingly extremely prone to religious experience. His strong lack of cynicism means that he is particularly open to the merits and demerits of points of view. Everybody, argue Spiegel and Spiegel,

¹⁰ At even less liminal universities, such as Leiden in Holland and Oulu in Finland, I found extremely low levels conversion. I do not think this rules-out the influence of creativity. England's average IQ is roughly the same as Holland and Finland (see Lynn 2006) yet it has far more people and thus far more universities than Holland. It follows that there would be more extremely intelligent people in England (enough to fill a university like Oxford) while Leiden (though including the extremely intelligent) would have a broader intelligence range.

apprehend the world through their own (to varying degrees) irrational prejudices. However, the Grade 5 is less encumbered with this meaning that, despite his emphasis on feeling over reason, he is able to approach arguments in an extremely neutral manner. He also has an extremely good memory (something vital to high performance in both written and oral exams of the kind engaged in successfully by students at prestigious universities such as Oxford). Spiegel and Spiegel (407) observe that the Grade 5 has an “excellent memory. Like a sponge absorbs water, they take in everything”. While everything is taken in, however, it is not necessarily “accepted”. The Grade 5 then compartmentalises information as anybody else would. Of course, it is not being suggested that Oxford University is overwhelmed by “Grade 5s’ or ‘Dionysians” as they are also known. But it does indicate that the ability to “acquire knowledge” (that is memory and relatively open mind) lead to a flipside and that is hypnotisability. Highly intelligent students (partly by definition) are likely to be very competent at acquiring knowledge and approaching new knowledge with an open mind – this is, after all, vital in order to be critical. However, the flipside of this is that they are prone to hypnosis which can lead both to religious experience and, in effect, what is colloquially called “brainwashing”. Certainly, there is widespread agreement amongst neuroscientists that hypnotisability is strongly related to the capacity to represent experience, that is to say “memory”. Indeed, Spiegel and Spiegel find that Grade 5s, with their excellent memories, can regress under hypnosis to their child-selves with an extraordinary degree of verisimilitude, always remaining in the present tense. Many theorists (e.g. Phelps 2004) argue that for anything to be remembered at all there must be a strong emotional element. And memories of a highly emotive nature can be rendered conscious by stimulating the temporal lobes where the amagdyla is situated. Accordingly, there is a case for arguing that having a formidable memory is likely to be related to having a propensity for religious experience and, as discussed, we would expect to see an excellent memory in those we would regard as intelligent. Moreover, other factors that compose intelligence – such as the ability to focus

intensely and approach issues critically – also have a byproduct of hypnotisability and thus religious experience and differentiated group membership.

Of course, this does not in any way imply that the “religious” are more intelligent than those who do not believe in God. Indeed, some evidence points in the opposite direction. Nyborg (2008) found that atheists tend to be noticeably more intelligent than agnostics or dogmatic believers in terms of raw IQ points. He writes:

“The present study examined whether IQ relates systematically to denomination and income within the framework of the *g* nexus, using representative data from the National Longitudinal Study of Youth (NLSY97). Atheists score 1.95 IQ points higher than Agnostics, 3.82 points higher than Liberal persuasions, and 5.89 IQ points higher than Dogmatic persuasions. Denominations differ significantly in IQ and income. Religiosity declines between ages 12 to 17. It is suggested that IQ makes an individual likely to gravitate toward a denomination and level of achievement that best fit his or hers particular level of cognitive complexity. Ontogenetically speaking this means that contemporary denominations are rank ordered by largely hereditary variations in brain efficiency (i.e. IQ). In terms of evolution, modern Atheists are reacting rationally to cognitive and emotional challenges, whereas Liberals and, in particular Dogmatics, still rely on ancient, pre-rational, supernatural and wishful thinking”.

It follows that we would expect there to be a relatively large number of atheists (above the average level for the population) at a university such as Oxford. Were this the case, following Hammond and Hunter’s (1984) findings, we would indeed expect a highly differentiated Christian Union attempting to preserve Christians as such in response to this and this is what we find. My difficulty with this research is that the dogmatic followers of historicism (such as fervent Marxists or fervent nationalists) may well not be especially intelligent but they would presumably class themselves as “atheists”, at least in the former case. I am unsure as to how this would fit into research of this kind but I cannot see how atheism – especially if it is dogmatic – can be regarded as inherently rational at all. Indeed, the research found that Jews and then Anglicans had, on average, higher IQs than atheists. Also, it has been observed that religious people actually appear to have a higher level of spatial-visual intelligence (a vital part of any intelligence test) than people with Parkinson’s disease who

(due to damage to their pre-frontal lobes) tend to be especially irreligious. The same researchers found no correlation whatsoever between education level and religiosity amongst those with an otherwise similar background (McNamara et al 2006). Boyer (2001, 370) observes that irreligiousness in the broad sense of being focussed purely on the scientific method is extremely rare: “Scientific progress is brought about by a very odd form of social interaction, where some of our motivational systems (a desire to reduce uncertainty, to impress other people, to gain status as well as the aesthetic appeal of ingenuity) are recruited for purposes quite different from those relevant to our evolutionary history . . . which is why it has only been developed in a very small number of people . . .”. Such people would be intelligent and to be truly successful they would have other qualities the lack of which would have little to do with IQ intelligence such as, perhaps, not caring about convention which would permit creative original thinking¹¹. Thus, it may be that elite universities favour not simply those who have a high IQ (only one form of intelligence as we have seen) but those who, in addition to a high IQ, exhibit high levels of creativity and originality, something distinct from pure high intelligence in the IQ sense. It is this originality which is, after all, necessary for cutting-edge research (when coupled with high intelligence and technical skill). And, as we have observed, it is the creative type who is more prone to religious experiences.

I cited information above on the relationship between the kind of school attended in Britain and conversion experience at Oxford. Lack of space precludes us from examining this in considerable detail. However, a large body of research indicates that there is a broad social class difference in Britain with regard to the kind of school which children attend. In particular, members of the upper class tend towards “public schools”. These schools often involve boarding (rendering them a liminal phase) and the education is agreed to be of a

¹¹ Lynn (2006, 239) argues that this latter quality is vitally important in terms of original thinking. He claims, for example, that Europeans are more inventive than the Japanese (who are significantly more, on average, than Europeans partly because the Japanese have a lower genetic of psychopathology, the flip-side of which is a lack of concern for the feelings of the pack.

very high standard. The upper-middle class may send their children either to public schools or private schools at which they do not board. Both kinds of school involve an entrance exam (of varying degrees of difficulty) and tuition fees. These schools are attended by around ten percent of the population. The rest attend “state schools”. These include (rarely) Grammar schools (for which an exam must be passed) and Comprehensives which are similar to American “public schools” (see Fox 2004 for further discussion). Obviously, there are substantial differences in standard between these schools but – at its broadest – private schools are able to offer a higher standard of education than state schools. If only because they have far more money (and even pay teachers higher salaries) students can be coached in a way that is very difficult in much of the state sector. There would, for example, be no student at a private school with “learning difficulties”. I think this is worth at least comment in terms of the possibility being advanced here. We noted above that religious experience and conversion was more common at Oxford amongst state school pupils. A possible reason is that the university places them under greater psychological pressure: “Oxford” is likely to be new to them as are all its rituals, it involves a greater rise in status for them, they are less likely to have taken a “Gap Year”, they will never have lived at school. But could intelligence be a further issue? If they have received a far worse education than their peers but have done equally well academically, might this mean that they are more intelligent than their privately educated peers? This is certainly the assumption of the university admissions system in the UK which discriminates in favour of state school candidates over private school candidates when both are equally qualified. It might be argued that having educated parents would also be significant in terms of cultural capital and hereditary intelligence, making the kind of school attended less significant. As their levels of conversion are higher, this would be congruous with the other suggestions which have advanced. But this is not something on which we can comment with any certainty.

6. Conclusions

In presenting this article, I have aimed to exploit data in order to further understand research in my own narrow field of student evangelicalism. Accordingly, it is appreciated that this article is necessarily presenting suggestions – albeit evidence-based – rather than a firm “conclusion”. Nevertheless, the evidence available makes, in my view, a persuasive case. The anthropological research into student evangelical groups has found that conversion levels are higher and evangelical groups more differentiated at the more liminal (and thus pressurising) British universities such as Oxford. It has found that students for whom university is the most liminal are the most likely to undergo religious experiences in this highly transitional context. This is further substantiated by detailed surveys at US universities and academic anecdotal evidence from scholars at various other universities. My aim, in this article and in line with the consilience programme, has been to deepen our understanding of these results by applying to them research from the hard sciences – in this case neuroscience. Research in this area, especially by Persinger, indicates that it is creative people (those who are highly intelligent, original in their thoughts and academically oriented) who are more likely to have religious experiences when sufficiently stimulated and that it is distress – which we have shown to be a factor at universities such as Oxford – which would act as such a stimulation. Secondly, we have observed – drawing upon both Persinger and other researchers – that the ability to acquire knowledge and focus intensely (both key components to intelligence and flourishing in the exam systems at universities such as Oxford) is found to the greatest extent in people who are highly suggestible. These people, in line with Persinger’s research, tend to be highly creative and, because of a kind of “innocence”, more able to empathise and evaluate diverse points of view free of prejudice. I would suggest that this latter quality would also be important in order to flourish academically.

As I have emphasised, there is a degree to which this hypothetical and there are various ways in which greater

credence could be added to it such assorted intelligence tests on students at elite universities coupled with surveys on their religious experiences. Various scholars have concluded that because humanity's hardwiring, humans will always have some kind of religiosity. I would make a far narrower point. Students who attend an academically elite university such as Oxford will always come across a highly organised religious group including students who have "converted" while there with mystical experiences. And this is because there is evidence that these very students are precisely the kind of people most likely to be induced into religious experience in these highly liminal circumstances.

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