Original citation:

Permanent WRAP url:
http://wrap.warwick.ac.uk/52698

Copyright and reuse:
The Warwick Research Archive Portal (WRAP) makes the work of researchers of the University of Warwick available open access under the following conditions. Copyright © and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable the material made available in WRAP has been checked for eligibility before being made available.

Copies of full items can be used for personal research or study, educational, or not-for-profit purposes without prior permission or charge. Provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

Publisher’s statement:
"This is an Author's Accepted Manuscript of an article published in Francis, Leslie J., Croft, Jennifer, Pyke, Alice and Robbins, Mandy. (2012) Young people’s attitudes to religious diversity: quantitative approaches from social psychology and empirical theology. Journal of Beliefs & Values, Vol.33 (No.3). pp. 279-292 as published in the Journal of Beliefs & Values, (2012), © Taylor & Francis, available online at:
http://www.tandfonline.com/10.1080/13617672.2012.732808"

A note on versions:
The version presented here may differ from the published version or, version of record, if you wish to cite this item you are advised to consult the publisher’s version. Please see the ‘permanent WRAP url’ above for details on accessing the published version and note that access may require a subscription.

For more information, please contact the WRAP Team at: wrap@warwick.ac.uk

http://go.warwick.ac.uk/lib-publications
Young People’s Attitudes to Religious Diversity Project: quantitative approaches from social psychology and empirical theology

Leslie J. Francis*
University of Warwick, UK

Jennifer Croft
University of Warwick, UK

Alice Pyke
University of Warwick, UK

Mandy Robbins
Glyndŵr University, Wales, UK

Author note:
*Corresponding author:
Leslie J Francis
Warwick Religions & Education Research Unit
Institute of Education
The University of Warwick
Coventry CV4 7AL United Kingdom
Tel: +44 (0)24 7652 2539
Fax: +44 (0)24 7657 2638
Email: leslie.francis@warwick.ac.uk
Abstract

This paper discusses the design of the quantitative component of the Young People’s Attitudes to Religious Diversity Project, conceived by Professor Robert Jackson within the Warwick Religions and Education Research Unit, and presents some preliminary findings from the data. The quantitative component followed and built on the qualitative component within a mixed method design. The argument is advanced in seven steps: introducing the major sources of theory on which the quantitative approach builds from the psychology of religion and from empirical theology; locating the empirical traditions of research among young people that have shaped the study; clarifying the notions and levels of measurement employed in the study anticipating the potential for various forms of data analysis; discussing some of the established measures incorporated in the survey; defining the ways in which the sample was structured to reflect the four nations of the UK and London; illustrating the potential within largely descriptive crosstabulation forms of analysis; and illustrating the potential within more sophisticated multivariate analytic models.

Keywords: psychology of religion, empirical theology, religious diversity, adolescents, quantitative research.
Introduction

The Young People’s Attitudes to Religious Diversity Project, conceived and directed by Professor Robert Jackson within the Warwick Religions and Education Research Unit, was designed to maximise the research insights of both qualitative and quantitative methods. Within the time constraints of a three year project, it was decided to begin with the qualitative research and to allow the findings of the qualitative approach to inform aspects of the quantitative approach. At the current stage of the project, the quantitative data are still being prepared for analysis. The aims of the present paper, therefore, are to discuss the design of the quantitative study and to display some of the ways in which the data can be analysed, drawing on the first 3,020 surveys to be entered into the computer. The argument will be advanced in seven steps: introducing the major sources of theory on which the quantitative approach builds; locating the empirical traditions of research among young people that have shaped the study; clarifying the notions and levels of measurement employed in the study; discussing some of the established measures incorporated in the survey; defining the ways in which the sample was structured; illustrating the potential within largely descriptive crosstabulation forms of analysis; and illustrating the potential within more sophisticated multivariate analytic models.

Sources of theory

The rich and thick data generated by the qualitative study raised a number of key issues both about how young people expressed their attitudes toward religious diversity and about the factors that helped to shape those attitudes. Such influences included sociological factors (like family), personal factors (like sex), psychological factors (like personality), and theological factors (like ideas about God). These key issues resonated with work already well established within various quantitative research traditions. Two particularly relevant
quantitative research traditions are provided by the psychology of religion and by empirical theology.

Quantitative research in the psychology of religion has its roots in the late nineteenth and early twentieth century, but it was not until the mid 1950s that sufficient independent studies had been conducted to provide the basis for beginning to coordinate evidence and to draw useful conclusions. Michael Argyle’s (1958) pioneering book Religious Behaviour clearly demonstrated that a body of empirically-based knowledge was beginning to emerge in the psychology of religion. Michael Argyle provided significant updates of his original review of the literature in the mid 1970s and the mid 1990s (see Argyle & Beit-Hallahmi, 1975; Beit-Hallahmi & Argyle, 1997).

Essentially Argyle’s work stands within the individual differences tradition of psychology. In the 1950s Argyle concluded that the major individual difference associated with religion was that of sex difference. Routinely empirical studies showed women to be more religious than men, at least when religion is defined in terms of Christian beliefs, practices and values. By the 1990s Argyle concluded that the connection between religion and personality was a second secure finding, drawing on the explosion of studies that had concentrated on testing this association from the early 1980s (see Francis, Pearson, Carter, & Kay, 1981a, 1981b; Francis, Pearson & Kay, 1982). The trends charted by Argyle have been brought further up-to-date (from an American perspective) by Hood, Hill and Spilka (2009).

The quantitative phase of the Young People’s Attitudes to Religious Diversity Project draws on theories developed within the individual differences approach to the psychology of religion, including theories concerned with the influence of sex and with the influence of personality. By taking such theories into account in designing the quantitative phase of the project, the findings from the study are likely to inform current debates rehearsed in journals.

Quantitative research in empirical theology has its roots in the 1970s and was shaped by theologians working with methods and theories informed by the social sciences. Empirical theology was conceived in the Netherlands by Hans van der Ven as an interdisciplinary activity whereby the tools of the social sciences were taken into theology and tested by the theological academy. Empirical theology was conceived in England and Wales by Leslie J Francis as an interdisciplinary activity whereby the practitioners of empirical theology sought to have their work tested both by the theological academy and by social scientists. The debate between these two perspectives was well captured by Cartledge (1999) in Journal of Beliefs and Values.

As a relatively new and emerging discipline, it remains too early for major reviews to have drawn together key findings, although clear patterns are emerging with Journal of Empirical Theology, through the conferences of the International Society for Empirical Research in Theology, and through the series of essays published by Brill including: Religion inside and outside traditional institutions (Streib, 2007), Empirical Theology in texts and tables: Qualitative, quantitative and comparative perspectives (Francis, Robbins & Astley, 2009), and The public significance of religion (Francis & Ziebertz, 2011).

At heart empirical theology is concerned to conceptualise and to operationalise constructs informed by theological debate rather than by sociological debate or psychological debate. One good example of such constructs is provided by the notion of God images as displayed by Ziebertz (2001) in the collection of essays Imaging God and by Hegy (2007) in the collection of essays What do we imagine God to be? The function of ‘God Images’ in our lives. God images may be concerned with key theological concepts like the debate between the God of mercy and the God of justice. A second good example of such constructs is
provided by the notion of the theology of individual differences as displayed by Francis (2005) and by Francis and Village (2008). Drawing on a strong doctrine of creation shaped by Genesis 1:27 the theology of individual differences posits fundamental human differences (like sex, ethnicity and psychological type) as reflecting the image of the divine creator.

The quantitative phase of the Young People’s Attitudes to Religious Diversity Project draws on theories developed within the individual differences approach to empirical theology, including theories concerned with the influence of God images. By taking such theories into account in designing the quantitative phase of the project, the findings from the study are likely to inform the current debates rehearsed in journals like *International Journal of Practical Theology, Journal of Empirical Theology, Review of Religious Research*, and *Journal of Psychology and Theology*.

**Empirical traditions**

The quantitative phase of the Young People’s Attitudes to Religious Diversity Project was not developed within a vacuum, but built on three traditions of empirical research already well established within the capacity of the Warwick Religions and Education Research Unit, namely the Teenage Religion and Values Project, the Attitudes toward Religion Project, and the Outgroup Prejudice Project.

The Teenage Religions and Values Project had its roots in a series of studies published during the 1980s and 1990s, including *Youth in transit* (Francis, 1982), *Teenagers and the Church* (Francis, 1984), and *Teenage Religion and Values* (Francis & Kay, 1995), all concerned with modelling the association between various aspects of religion and spirituality and various areas of values and attitudes. During the 1990s, the Teenage Religions and Values Project set out to compile a database of 34,000 year nine and year ten pupils drawn from across England and Wales and reflecting the distribution of young people within state maintained and independent schools, including schools with a religious character. Findings
from this project were published in two major books, *The values debate* (Francis, 2001) and *Urban hope and spiritual health* (Francis & Robbins, 2005), and in a wide range of focused journal papers.

The Teenage Religion and Values Project brought to the quantitative phase of the Young People’s Attitudes to Religious Diversity Project a number of strengths, including experience in the design and administration of questionnaires among a large number of young people, sets of well-tested items, and a secure platform of empirical evidence against which findings from the new survey could be located. In particular, this project offered a helpful recognition of the multi-dimensional nature of religion operationalised in empirical research, distinguishing between five dimensions. These five dimensions are now included in the quantitative component of the Young People’s Attitudes to Religious Diversity Project.

The first dimension is self-assigned religious affiliation. This is the dimension of religiosity routinely gathered in many countries within the context of the national census and included for the first time in 2001 in the census for England and Wales and for Scotland. In England and Wales the census distinguished between the six main faith traditions (Buddhism, Christianity, Hinduism, Islam, Judaism, and Sikhism). In Scotland the census also distinguished between denominational strands within Christianity. Recognising the importance of the denominational differences within Christianity, the Teenage Religion and Values Survey made fine distinctions between different groups.

The second dimension is self-reported attendance at public centres of worship (including churches, synagogues, and mosques). Public religious practice taps the extrinsic aspects of religiosity.

The third dimension is self-reported personal prayer and self-reported reading of scripture. Personal religious practice taps the intrinsic aspects of religiosity.
The fourth dimension is religious belief. Belief in God may operate independently of self-assigned religious affiliation and of self-reported public and personal religious practice.

The fifth dimension is God images. Alongside a well-established research tradition concerned with assessing the social significance of belief in God, a second research tradition has examined the important of the kind of God in whom people believe (that is to say their image of God). The Teenage Religion and Values Survey included items concerned both with belief in God and with the kind of God in whom individuals believe.

Alongside theses indicators of conventional religiosity, the Teenage Religion and Values Survey also included a range of markers tapping aspects of alternative spiritualities. One key aspect of this area focused on the paranormal and on paranormal beliefs.

The Attitudes toward Religion Project had its roots in a study published in the late 1970s (Francis, 1978) that argued for the primacy of the attitudinal dimension of religion in building a coordinated approach to the psychology of religion. Initially this body of research was shaped entirely within the Christian tradition, drawing on the Francis Scale of Attitude toward Christianity, and by the mid 1990s Kay and Francis (1996) were able to integrate the findings from the first hundred studies to use that instrument.

The scope of the Attitude toward Religion Project was subsequently extended to other faith traditions through the Katz-Francis Scale of Attitude toward Judaism (Francis & Katz, 2007), the Sahin-Francis Scale of Attitude toward Islam (Sahin & Francis, 2002; Francis, Sahin, & Al-Failakawi, 2008), and the Santosh-Francis Scale toward Hinduism (Francis, Santosh, Robbins M., & Vij, 2008). More recently the Astley-Francis Scale Attitude toward Theistic Faith allows comparable studies to employ the same instrument within Christian, Islamic and Jewish, as well as secular contexts (Astley, Francis, & Robbins, in press). In order to locate its findings alongside the growing body of empirical evidence organised by the Attitudes toward Religion Project the quantitative component of the Young People’s
Attitudes to Religious Diversity Project now includes the Astley-Francis Scale of Attitude toward Theistic Faith.

The Outgroup Prejudice Project has its roots in collaborative work with Adrian Brockett and Andrew Village at York St John University. The first database developed by this project was employed by Brockett, Village, and Francis (2009) to develop the Attitude toward Muslim Proximity Index by analysing attitudes among 1,777 non-Muslim secondary school children in northern England. The scale was based on physical and social distance, using items related to the idea of having Muslims living at various distances from the respondent, to having Muslims marry into the family, and to mixing with Muslims wearing cultural dress (the hijab). The study showed that the notion of proximity could be used to measure prejudice toward Muslims among non-Muslim secondary school pupils. The advantage of the scale was that it was based on a range of notions surrounding ‘proximity’ of the outgroup, including different levels of proximity. One limitation of the scale was that it was applicable to non-Muslim attitudes toward Muslims and not vice versa.

The second database developed by the Outgroup Prejudice Project was designed to develop a scale using concepts related to the Attitude toward Muslim Proximity Index, but one that was generisable across ethnic or religious group. This second database, comprising 930 pupils from Blackburn, 1,376 pupils from Kirklees, and 2,116 pupils from York was employed by Brockett, Village, and Francis (2010), and Village (2011) to develop and test the Outgroup Prejudice Index as a reliable and valid scale that was comparable in measuring attitudes toward outgroup among Christians, among Muslims, and among those of no religious affiliation.

Drawing on the Outgroup Prejudice Project, the quantitative component of the Young People’s Attitudes to Religious Diversity Project now includes a wide range of proximity measures.
**Levels of measurement**

At the design stage, a quantitative survey needs to be clear about the levels of measurement to be achieved by the data, since this in turn shapes the statistical techniques that can be employed to interrogate the data at a later stage. The quantitative component of the Young People’s Attitudes to Religious Diversity Project was designed to be amenable to all kinds of statistical analysis up to multi-level linear models. Different parts of the survey included nominal, ordinal, interval and scaled levels of measurement.

Nominal levels of measurement include, for example, the question concerning religious affiliation. Such questions allow individuals to be placed within categories, but there is no natural progression within and between these categories. The question concerning sex is also a nominal variable, but since there are only two categories this is a nominal variable that can conventionally be employed in linear models.

Ordinal levels of measurement allow individuals to be placed in rank order without making assumptions about the equality of distances between the points within the ranking. The question concerning frequency of praying may fall into this category when individuals are invited to check one of the five options: nearly every day, at least once a week, at least once a month, occasionally, and never. Although the intervals between the points are clearly not equal, such variables may be employed in linear models.

Interval levels of measurement allow assumptions about the equality of distances between the points. Within the social sciences this assumption is conventionally made with Likert scaling, following Likert (1932). The form of Likert scaling employed in the quantitative component of the Young People’s Attitudes to Religious Diversity Project invites pupils to assess clear well-focused statements on the conventional five point scale: agree strongly, agree, not certain, disagree, and disagree strongly.
Scaled levels of measurement go one stage further and combine a set of items to assess a broader underlying construct. There are three main benefits from this process of scaling. The first benefit is that it is possible to build a more complex theoretical understanding of what is being measured. For example, the notion of *extraversion* is more complex than something that can be captured by a single item, but may be more adequately captured by a set of items. The second benefit is that, while the individual’s responses to a single item may fluctuate from day to day, the overall pattern of responses to a set of items remains much more stable. Scales access a deeper level of personal stability. The third benefit is that when a set of items are brought together the range of scores is expanded. For example, on the Likert scale each item has a range of just five points (1 through 5). But when ten Likert items are combined the range expands (10 through 50). This provides greater differentiation between individuals. To be effective scales require careful development and testing.

**Instruments of measurement**

As well as providing the opportunity for the development of new scales, the quantitative component of the Young People’s Attitudes to Religious Diversity Project included a range of recognised and established instruments in order to link the findings from this new study into established and developing fields of enquiry. Such established scales include measures of attitude toward religion, God images, self-esteem, empathy, and personality. This aspect of measurement will be illustrated by reference to the Eysenckian dimensional model of personality and to the family of instruments designed to access and assess these dimensions.

Eysenck’s dimensional model of personality was selected for inclusion in the quantitative component of the Young People’s Attitudes to Religious Diversity Project for three reasons. First, the model proposes an economical and robust account of individual differences in terms of three higher order factors that have been shown to be stable across
cultures and across the age range. Moreover, the model proposes a continuum from normal to abnormal personality that in turn may function as an index of individual differences in psychological health. Second, as Beit-Hallahmi and Argyle (1997) demonstrated, since the 1980s there has been a concerted research interest in establishing both the theoretical and the empirical connection between the model of personality and individual differences in religiosity. Third, the model has played a key role in the three earlier projects on which this project builds, namely the Teenage Religion and Values Project, the Attitudes toward Religion Project and the Outgroup Prejudice Project.

Eysenck’s three higher order dimensions of personality are all named by the high scoring pole of the continuum: extraversion, neuroticism, and psychoticism. Eysenck’s choice of terms like neuroticism and psychoticism to describe aspects of normal personality is both illuminating and unhelpful. It is illuminating in the sense of underscoring the Eysenckian view that neurotic and psychotic disorders are not discrete categories discontinuous from normal personality. It is unhelpful in the sense of describing perfectly healthy aspects of normal personality with terms redolent of poor psychological health. These three dimensions have been measured among adults by the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), and by the Eysenck Personality Questionnaire Revised (Eysenck, Eysenck, & Barrett, 1985). They have been measured among young people by the Junior Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), and by the Junior Eysenck Personality Questionnaire Revised (Corulla, 1990). These instruments also routinely include a lie scale. Alongside the full versions of these measures abbreviated forms have been produced for use among adults (Francis, Brown, & Philipchalk, 1992) and for use among young people (Francis, 1996). It is the abbreviated form of the Junior Eysenck Personality Questionnaire Revised that has been included in the quantitative component of the Young People’s Attitudes to Religious Diversity Project.
The first dimension assesses introversion, through ambiversion to extraversion. Eysenck’s extraversion scales measure sociability and impulsivity. The opposite of extraversion is introversion. The middle range between extraversion and introversion is often termed ambiversion. The high scorer on the extraversion scale is characterised by the test manual (Eysenck & Eysenck, 1975) as a sociable individual, who likes parties, has many friends, needs to have people to talk to, and prefers meeting people to reading or studying alone. The typical extravert craves excitement, takes chances, acts on the spur of the moment, is carefree, easy-going, optimistic, and likes to ‘laugh and be merry’. In the survey, extraversion is accessed by items like, ‘Do you like going out a lot?’ and ‘Would you rather be alone instead of being with other people?’.

The second dimension assesses emotional stability, through emotional lability, to neurotic disorder. Eysenck’s neuroticism scales identify the underlying personality traits which at one extreme define neurotic mental disorder, including emotional lability and over-reactivity. The opposite of neuroticism is emotional stability. The high scorer on the neuroticism scale is characterised by the test manual as an anxious, worrying individual, who is moody and frequently depressed, likely to sleep badly and to suffer from various psychosomatic disorders. Eysenck and Eysenck (1975) suggest that if the high scorer on the neuroticism scale ‘has to be described in one word, one might say that he was a worrier; his main characteristic is a constant preoccupation with things that might go wrong, and with a strong emotional reaction of anxiety to these thoughts.’ In the survey, neuroticism is accessed by items like, ‘Are your feelings easily hurt?’ and ‘Do you often feel “fed up”?’.

The third dimension assesses tendermindedness, through toughmindedness, to psychotic disorder. Eysenck’s psychoticism scales identify the underlying personality traits which at one extreme define psychotic mental disorders. The opposite of psychoticism is normal personality. The high scorer on the psychoticism scale is characterised by Eysenck
and Eysenck (1976), in their study of psychoticism as a dimension of personality, as being ‘cold, impersonal, hostile, lacking in sympathy, unfriendly, untrustful, odd, unemotional, unhelpful, lacking in insight, strange, with paranoid ideas that people were against him’. In the survey, psychoticism is accessed by items like ‘Do you enjoy hurting people you like?’ and ‘Would you enjoy practical jokes that could sometimes hurt people?’.

The lie scale was originally introduced to personality tests to identify individuals who were trying to create a good impression, but subsequently scores recorded on the lie scale have been interpreted more broadly to reflect a form of social conformity or social acquiescence. In the survey, this construct is accessed by items like, ‘Have you ever said anything bad or nasty about anyone?’ and ‘Have you ever taken anything (even a sweet) that belonged to someone else?’.

**Designing the survey**

As in all good quantitative studies, the first step was to design a pilot survey. At this stage a long questionnaire was devised containing options from which choices could be made. This long questionnaire was administered throughout one school that was particularly interested in working on the project. This pilot study involved both cognitive testing and quantitative testing in order to check how the sections worked and to select the better performing components.

The main project was designed to collect data from at least 2000 year nine and year ten pupils from each of the ‘five nations’ of the UK, defined as England, Northern Ireland, Scotland, Wales, and London. Within each nation half of the pupils were recruited from schools with a religious character. From England, Northern Ireland, Scotland and Wales half of the pupils were recruited from urban areas and half from rural areas. Within London half of the pupils were recruited from inner London and half from outer London.
The interim analyses reported in the following sections of the paper were conducted at the end of June 2011 when 3,020 completed questionnaires were available for interrogation. This sample comprised 1,587 males and 1,433 females; 1,892 pupils from schools with a religious character and 1,128 from secular schools.

**Crosstabulation**

One of the simpler forms of analysis through which a database of this nature can be interrogated is that of crosstabulation. The potential within this method will be illustrated by identifying an appropriate research question. The question concerns the connection between the pupils’ religious identity and their personal wellbeing, their views on religion and equality, and their attitudes toward Islam.

First, however, the notion of ‘religious identity’ requires clarification and clear operationalisation within the contextual constraints of the survey. Religious identity is often regarded as synonymous with self-assigned religious affiliation. It is this level of information that is collected by the national census and was also available within the survey. Religious affiliation by itself, however, is a fairly crude measure of religious identity. A somewhat more refined construct is generated by taking religious practice into account as well. The Young People’s Attitudes to Religious Diversity Project asked both about religious affiliation and about religious practice in terms of attendance at religious worship services (e.g. in a church, mosque, or synagogue). After the 2001 census in England and Wales reported that 72% of the population self-identified as ‘Christian’, academic debate focused on the extent to which religious affiliation without practice becomes a meaningless category. In his analysis of British Social Attitudes Survey data, Francis (2003) demonstrated that non-practising, self-identified Christians display a distinctive profile of values compared with those who self-identify as ‘no religion’. Building on this basis, the following analyses distinguish between three religious identities: no religious affiliation and no religious attendance, Christian
affiliation and no religious attendance, and Christian affiliation with weekly attendance. To avoid contamination by sex differences, the following analyses were conducted among female pupils only.

- Insert table 1 here –

Table 1 takes these three categories of religious identity and crosstabulates them against 13 items from the questionnaire (three concerned with personal wellbeing, five concerned with religion and equality, and five concerned with attitudes toward Islam). In the questionnaire each of these 13 items was rated on a five-point Likert scale. In order to generate crosstabulated data, the five points of the Likert scale were reduced into two categories: yes (agree strongly and agree) and no (disagree strongly, disagree, and uncertain). The significance of the differences between the responses of the three religious identity categories to each of the attitude items was tested by the chi-square contingency statistic and expressed in the table in terms of the probability level. The table shows than on 11 of the 13 items the differences between the three religious identity groups reached the highest level of statistical significance ($p < .001$).

In terms of personal wellbeing the non-attending Christians recorded higher levels of purpose in life and lower levels of depression and suicidal ideation in comparison with the non-attending non-affiliates. The highest level of personal wellbeing was experienced by the attending Christians.

In terms of religion and equality, generally the non-attending Christians take a more positive view in comparison with the non-attending non-affiliates, but a less positive view than the attending Christians.

In terms of attitudes toward Islam, the most positive and accepting view is taken by the churchgoing Christians. These findings suggest that a negative view of Muslims is more prevalent among secular young people than among young people who are practising members
of Christian churches. In this sense Christianity is seen to promote acceptance, not rejection, of adherents of Islam.

**Correlational and multivariate models**

A more powerful and more complex way of handling the data generated by the Young People’s Attitudes to Religious Diversity Project is offered by correlational and multivariate statistical models. The potential within this method will be illustrated by identifying an appropriate research question. The question concerns identifying the relative power of personal, psychological, theological and contextual factors in shaping young people’s attitudes toward religious diversity.

- Insert table 2 –

First, however, the notion of ‘attitudes toward religious diversity’ requires clarification and clear operationalisation within the context and constraints of the survey. The questionnaire contained a wide range of items relevant to this broad underlying construct. Table 2 presents the 11 items identified by exploratory factor and correlational analyses (five negatively phrased items and six positively phrased items) as cohering most satisfactorily into a unidimensional scale. Table 2 presents the correlations between each individual item and the sum of the other items (ranging between .47 and .74) and the alpha coefficient (Cronbach, 1951). The alpha coefficient in well in excess of DeVellis’ (2003) minimum threshold of .65.

Second, the notion of personal, psychological, theological and contextual factors also requires clarification and clear operationalisation. Within the survey, personal factors are represented by sex and age; psychological factors are represented by the four measures proposed by the abbreviated form of the Junior Eysenck Personality Questionnaire Revised (extraversion, neuroticism, psychoticism, and the lie scale); theological factors are represented by the Astley-Francis Scale of Attitude toward Theistic Faith and the God images
index; and contextual factors are represented by school type (schools with a religious character and secular schools).

- Insert table 3 –

Table 3 explores the predictive power of these personal, psychological, theological and contextual factors on attitude toward religious diversity in three steps (reflected in the three columns in the table). Step one (in the first column) presents the bivariate Pearson correlation coefficients between sex and age and attitude toward religious diversity. Considered separately both correlations are significant. A more positive attitude toward religious diversity is held among females than among males and is held among year nine pupils than among year ten pupils.

Step two (in the second column) presents the bivariate partial correlations between attitude toward religious diversity and the psychological, theological and contextual variables after controlling for sex and age. Considered separately three of the four Eysenckian measures and both of the theological measures have statistically significant associations with attitudes toward religious diversity.

Step three (in the third column) employs multiple regression to assess the simultaneous influence on attitudes toward religious diversity of the personal, psychological, theological and contextual factors. The beta weights now clarify the picture and demonstrate that the apparent influence of the lie scale and of attitudes toward theistic belief (indicated by the partial correlation coefficient) was an artefact of other correlations within the overall system. Table three shows that personal factors (sex and age), psychological factors (neuroticism and psychoticism) and theological factors (God images) are all implicated in predicting attitudes toward religious diversity. The most positive attitude toward religious diversity is held by younger females who are tenderminded (low on psychoticism) and more emotionally engaged (high on neuroticism) and who believe in a loving God of mercy (God
Schools with a religious character, however, are not implicated in predicting attitudes toward religious diversity after taking all these other factors into account.

**Conclusion**

This paper set out to offer an overview of the design and scope of the quantitative component of the Young People’s Attitudes to Religious Diversity Project, conceived by Professor Robert Jackson within the Warwick Religions and Education Research Unit within the Religion and Society Programme jointly sponsored by the AHRC and ESRC. The paper has also illustrated ways in which the data generated by this quantitative component of the project may be explored to generate insights into the nature of young people’s attitudes toward religious diversity, into individual differences in these attitudes, and into the correlates of these attitudes. Such analyses may be used to test a wide range of theories regarding the correlates, antecedents and consequences of the variety of approaches that young people take to making sense of the lives within religiously diverse and religiously complex societies. The rich source of data now assembled is ready for such analyses to proceed.

**Note**

Young People's Attitudes to Religious Diversity Project (AHRC Reference: AH/G014035/1) is a large scale mixed methods research project investigating the attitudes of 13- to 16-year-old students across the United Kingdom. Young people from a variety of socio-economic, cultural, ethnic and religious backgrounds from different parts of England, Wales, Northern Ireland and Scotland, with the addition of London as a special case, are taking part in the study. Professor Robert Jackson is principal investigator and Professor Leslie J Francis is co-investigator. Together they lead a team of qualitative and quantitative researchers based in the Warwick Religions and Education Research Unit, within the Institute of Education at the
University of Warwick. The project is part of the AHRC/ESRC Religion and Society Programme, and runs from 2009-12.
References


Table 1

*Religious identity and personal and social attitudes*¹

<table>
<thead>
<tr>
<th>affiliation</th>
<th>attendance</th>
<th>none</th>
<th>Christian none</th>
<th>Christian weekly</th>
<th>p &lt;⁵</th>
</tr>
</thead>
<tbody>
<tr>
<td>personal wellbeing</td>
<td>I feel my life has a sense of purpose</td>
<td>39</td>
<td>55</td>
<td>73</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>I often feel depressed</td>
<td>36</td>
<td>31</td>
<td>24</td>
<td>.01</td>
</tr>
<tr>
<td></td>
<td>I have sometimes considered taking my own life</td>
<td>22</td>
<td>16</td>
<td>14</td>
<td>.05</td>
</tr>
<tr>
<td>religion and equality</td>
<td>Promoting equality in society is important to me</td>
<td>53</td>
<td>52</td>
<td>74</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>We must respect all religions</td>
<td>73</td>
<td>78</td>
<td>93</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Learning about different religions in school is interesting</td>
<td>47</td>
<td>55</td>
<td>73</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Religion is mainly a force for bad in the world</td>
<td>25</td>
<td>19</td>
<td>8</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Religious people are often intolerant of others</td>
<td>31</td>
<td>24</td>
<td>21</td>
<td>.01</td>
</tr>
<tr>
<td>attitudes toward Islam</td>
<td>A lot of good is done in the world by Muslims</td>
<td>23</td>
<td>21</td>
<td>35</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>I am interested in finding out about Muslims</td>
<td>27</td>
<td>40</td>
<td>55</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Studying religion is school has shaped my view about Muslims</td>
<td>38</td>
<td>47</td>
<td>60</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Muslims should be allowed to wear the headscarf in schools</td>
<td>60</td>
<td>59</td>
<td>79</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>Muslims should be allowed to wear the Burka in schools</td>
<td>51</td>
<td>52</td>
<td>63</td>
<td>.001</td>
</tr>
</tbody>
</table>

Notes: 1. Based on responses of 1433 female pupils

2. No religious affiliation and no attendance.

3. Christian affiliation and no attendance

4. Christian affiliation and weekly attendance

5. Probability level based on $\chi^2$
Table 2

*Attitude toward Religious Diversity Index (ARDI)*

<table>
<thead>
<tr>
<th>Statement</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td>I would not like to live next door to a Buddhist</td>
<td>.71</td>
</tr>
<tr>
<td>I would not like to live next door to a Hindu</td>
<td>.74</td>
</tr>
<tr>
<td>I would not like to live next door to a Jew</td>
<td>.70</td>
</tr>
<tr>
<td>I would not like to live next door to a Muslim</td>
<td>.72</td>
</tr>
<tr>
<td>I would not like to live next door to a Sikh</td>
<td>.73</td>
</tr>
<tr>
<td>We must respect all religions</td>
<td>.58</td>
</tr>
<tr>
<td>Learning about different religions in school is interesting</td>
<td>.47</td>
</tr>
<tr>
<td>I would be happy about a close relative marrying someone from a different faith</td>
<td>.54</td>
</tr>
<tr>
<td>I would be happy to go out with someone from a different faith</td>
<td>.56</td>
</tr>
<tr>
<td>Having people from different religious backgrounds makes my school an interesting place</td>
<td>.53</td>
</tr>
<tr>
<td>People from different religious backgrounds make where I live an interesting place</td>
<td>.50</td>
</tr>
</tbody>
</table>

Note: 1. based on responses of 2,578 male and female pupils
2. these items were reverse coded to generate the scale
Table 3

Predictors of attitude toward religious diversity

<table>
<thead>
<tr>
<th></th>
<th>$r^2$</th>
<th>partial $r^3$</th>
<th>beta $^4$</th>
</tr>
</thead>
<tbody>
<tr>
<td>sex</td>
<td>.24***</td>
<td>.12***</td>
<td></td>
</tr>
<tr>
<td>age</td>
<td>-.06***</td>
<td>-.04*</td>
<td></td>
</tr>
<tr>
<td>extraversion</td>
<td>-.04</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>neuroticism</td>
<td>.08***</td>
<td>.07***</td>
<td></td>
</tr>
<tr>
<td>psychoticism</td>
<td>-.32***</td>
<td>-.27***</td>
<td></td>
</tr>
<tr>
<td>lie scale</td>
<td>.12***</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>theism</td>
<td>.22***</td>
<td>-.01</td>
<td></td>
</tr>
<tr>
<td>God image</td>
<td>.27***</td>
<td>.20***</td>
<td></td>
</tr>
<tr>
<td>school type</td>
<td>.01</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

Note: 1. Based on responses of 2,578 male and female pupils
2. Pearson correlation coefficients
3. Partial correlation coefficients controlling for age and sex
4. Beta weights (standardised regression coefficients)