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# Measuring the Contribution of Roman Catholic Secondary Schools to Students' Religious, Personal and Social Values

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## Measuring the Contribution of Roman Catholic Secondary Schools During the 1990s to Students' Religious, Personal and Social Values in England and Wales

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*Roman Catholic schools have been part of the state-funded system of education in England and Wales since the 1850s. Currently, Roman Catholic schools provide places for around 10% of students attending state-maintained primary and secondary schools. The present study employed data collected during the 1990s to compare a range of religious, social, and personal values among 1,948 year 9 and year 10 students from 10 Catholic schools (between 13 and 15 years of age) with those of 20,348 students from 93 schools without a religious foundation. It builds on earlier analyses of the same database by comparing the effect of school foundation after controlling for the individual religiosity of pupils using multilevel linear modelling. The data showed that students attending Catholic schools were significantly different from students attending schools without a religious foundation, after controlling for personal, contextual, psychological and religious factors, in respect of five of the 11 dependent variables tested. Students in Catholic schools were less likely to oppose drug use, more likely to support age-related illegal behaviours, had a poorer attitude toward school, and were more likely to oppose abortion or contraception. Some of these differences were related to the greater disaffection of non-religious pupils at Catholic schools compared with their counterparts in schools without a religious foundation. These findings suggest the value of conducting a comparable study during the 2010s.*

### Keywords

Catholic schools, student values, school effectiveness, multi-level analyses.

**T**he current state-maintained system of schools in England and Wales had its origin in a set of voluntary societies associated with the Christian Churches. It is this historical legacy that has shaped the current

provision for Catholic schools within the state-maintained sector (Chadwick, 1997; Cruickshank, 1963; Murphy, 1971). The process began with an initiative of the Free Churches forming the Royal Lancasterian Society in 1808 that was re-formed as the British and Foreign School Society in 1814. The Church of England responded to this initiative by forming the National Society for Promoting the Education of the Poor in the Principles of the Established Church in 1811 (Burgess, 1958). These two voluntary societies raised funds for building schools. In 1833 the Government began to offer financial support to complement voluntary donations made to these societies. The Catholic Poor School Committee was created in 1847 and became eligible to receive Government support alongside the other voluntary societies.

It was not until the Education Act of 1870 that the Government created a public mechanism for building schools, known as School Boards, and this mechanism was not designed to supplement church schools, but to fill the gaps left by voluntary provision (Rich, 1970). The Education Act of 1902 consolidated the dual provision of schools built and owned by voluntary bodies and schools built and owned by the School Boards. The landmark consolidation of this dual provision was engineered by the Education Act of 1944, which applied equally to England and Wales. This Education Act recognised the need to refinance the nation's education system for post-war reconstruction and the need to engage the Churches (the owners of many schools) in this process.

The genius of the Education Act of 1944 (Dent, 1947) resided in three provisions. First, statutory provision was made for religious instruction and daily acts of collective worship in *all* state-maintained schools, and the Churches were given a statutory role in writing the syllabus for religious instruction. For the Free Churches and for part of the Anglican Church, this statutory provision for religious instruction and for collective worship obviated the need for a separate provision of church schools. Second, church schools were given the option of accepting *voluntary controlled* status, whereby the Church retained ownership of the building, the right to appoint a minority of governors and the right to provide denominational worship, but were absolved from all ongoing financial liability. Third, church schools were also given the option of maintaining *voluntary aided* status, whereby the Church retained ownership of the building, the right to appoint a majority of governors, the right to appoint staff, and the right to provide both denominational worship and denominational religious instruction. Voluntary aided

status also involved ongoing financial responsibility for a significant part of the cost for maintaining existing buildings and creating new buildings (Dent, 1947).

The Free Churches, the Anglican Church (Church of England and Church in Wales), and the Catholic Church responded to the strategic provisions of the Education Act 1944 in distinctive ways. The Free Churches saw little further future in church schools and largely withdrew from the ongoing support for and maintenance of church schools. The Anglican Church agreed on no uniform policy and individual dioceses responded in different ways, resulting in a mixture of voluntary controlled schools and voluntary aided schools. The Catholic Church had a clear policy on preferring voluntary aided status as the way to secure the Church's distinctive voice in education and to ensure the distinctive character of Catholic schools. Hornsby-Smith (1978) documents the determination and commitment of the Catholic Church during the post-war years not only to sustain existing schools but also to establish new schools. It is this system of voluntary aided schools that continued to define the Catholic Church's presence within the state-maintained sector of education through the 1990s.

### **Researching student values**

Internationally, there is a well-established literature on the attitudes, values, and beliefs of past and present students attending Catholic schools, as illustrated by pioneering studies in Australia (Flynn, 1975, 1979, 1985; Fahy, 1976, 1978, 1980a, 1980b, 1982, 1992), Northern Ireland (Greer, 1981, 1982a, 1982b, 1985), and the United States of America (Greeley, McCready, & McCourt, 1976; Greeley & Rossi, 1966; Neuwien, 1966;). Within this broader international context, Gerald Grace has drawn attention to the comparative dearth of comparable empirical studies conducted in England and Wales (Grace, 2002, 2003, 2009). Nonetheless, since the 1970s, several independent initiatives have been taken to profile the attitudes, values, and beliefs of past and present students attending Catholic schools in England and Wales, stimulated in part by the provisions of the 1944 Education Act that enabled the Catholic Church to consolidate and to expand a system of primary and secondary schools within the state-maintained educational sector (Chadwick, 1997; Cruickshank, 1963; Murphy, 1971).

During the 1960s, three independent studies were reported by Brothers (1964), Lawlor (1965), and Spencer (1968). These studies began to question the

effectiveness of Catholic schools on shaping their students' religious commitment. For example, Spencer's (1968) study reported that, in a sample of 1,652 Catholics between the ages of 15 and 24, 75% of those with some form of Catholic schooling attended church, but so did 74% of those who had not attended Catholic schools but had attended catechism lessons outside school hours.

During the 1970s, Hornsby-Smith (1978) brought together three studies conducted with Ann Thomas, Margaret Petit, and Johanna Fitzpatrick. These studies added further perspectives on the strengths and limitations of Catholic schooling. For example, Petit's study demonstrated that, while students attending Catholic schools differed in some respects from students attending county schools, there was also a large measure of overlap in the beliefs and values of the students within the two types of school (Hornsby-Smith & Petit, 1975). A fourth study reported by Hornsby-Smith and Lee (1979), conducted among 1,023 self-identified or baptised Catholics, found that the effect of Catholic education is small but significantly positive, in respect to adult religious practice, mass attendance, communion reception, frequency of confession, private prayer, doctrinal orthodoxy, and church involvement.

During the late 1970s and through the 1980s, Leslie J. Francis and his associates initiated a series of studies exploring the relationship between Catholic schools and students' attitudes toward Christianity, compared with other types of schools. Francis (1979, 1986a, 1987) identified a unique contribution made by Catholic primary schools to the development of a positive attitude toward Christianity among 10- to 11-year-old students. On the other hand, Boyle and Francis (1986) and Francis and Carter (1980) found no comparable influence attributable to Catholic middle schools or to Catholic secondary schools on the attitudes of older pupils.

During the 1980s, Josephine Egan and Leslie J. Francis began to draw attention to the important interaction between the Catholic school and the students' home backgrounds. Francis (1986b) assessed attitude toward Christianity among 11-16 year old students attending Catholic comprehensive schools in two Midland conurbations. The data demonstrated that non-Catholic students attending Catholic schools recorded a less sympathetic attitude toward Christianity than Catholic students. About 17% of the students admitted to these schools were not baptised Catholics. He concluded that, if one of the aims of the Catholic Church in maintaining Catholic schools in England is to provide a faith community in which Catholic students are supported by a positive attitude toward Christianity among their peers, these

findings place a caveat on a policy of recruiting a significant proportion of non-Catholic students, even from churchgoing backgrounds. He suggested that the lower scores of attitude toward Christianity among the churchgoing non-Catholic students might well be a function of the incompatibility between their own religious background and the doctrinal, liturgical and catechetical assumptions of the school.

Egan (1985, 1988), and Egan and Francis (1986) developed a set of three instruments to assess students' attitudes toward attending Catholic schools. The scales measured attitude toward the traditional method of the Catholic school system, attitude toward religious education in the Catholic school system, and attitude toward attending the Catholic school. These studies explored the differences in attitudes held by practising Catholics, non-practising Catholics and non-Catholic students attending Catholic secondary schools in Wales. The data demonstrated that the most serious disaffection with the Catholic school is attributable not so much to the non-Catholic students as to the non-practising Catholic students. This is a much larger problem for the Catholic Church in Wales. While less than 9% of the Welsh sample were non-Catholics, less than half of the girls and only slightly more than two-fifths of the boys were weekly mass attenders, while only two-fifths of both sexes were supported by weekly mass attending mothers and only one-quarter by weekly mass attending fathers.

During the second half of the 1990s and through the 2000s, in a series of studies examining academic performance, Morris (1994, 1995, 1997, 1998a, 1998b, 2001, 2005a, 2005b) and Godfrey and Morris (2008) drew attention to the apparent success of Catholic schools in engendering a positive attitude toward learning among their students. On the other hand, in respect of the post-16 sector, Morris (2007) found considerable variation in student achievement in relation to the size and status of Catholic sixth forms. When the results from students attending different types of Catholic sixth form were aggregated, students appeared to be under-performing compared with students at non-Catholic sixth forms.

During the first half of the 2000s, two analyses drew on the substantial Teenage Religion and Values database (Francis, 2001) to examine the values of students educated in Catholic schools alongside the values of students educated in schools without a religious foundation. In the first analysis, Francis (2002) compared the moral and religious values of 12,669 male students and 12,469 female students educated in state-maintained schools without a religious foundation with the responses of 1,269 male students and 1,203 fe-

male students educated in Catholic voluntary aided schools. In this analysis, a further distinction was made between four categories of students attending the Catholic schools: 360 male and 422 female practising Catholics (who attend church every Sunday); 382 male and 346 female sliding Catholics (who attend church some Sundays but less often than weekly); 108 male and 39 female lapsed Catholics (who never attend church on a Sunday); and 419 male and 396 female non-Catholics (who have not been baptised in the Catholic Church and who may or may not be practising members of other denominations).

Comparison between students in Catholic schools and those in non-denominational schools demonstrated significant differences in moral and religious values. On average, students in the Catholic schools scored more highly on religious and moral values. In this sense, parents who send their children to Catholic schools can expect their children to be part of a community in which the students display a higher level of commitment to Christian moral values and religious values than would be the case in non-denominational schools.

Closer analysis of the values of different students at Catholic schools indicated that it is necessary to consider them as heterogeneous rather than as a homogeneous faith community. The data supported the earlier suggestion of Francis (1986b), Egan and Francis (1986), and Francis and Egan (1987, 1990) that separate attention needs to be given to four categories of students attending Catholic schools, namely practising Catholics, sliding Catholics, lapsed Catholics, and non-Catholics. As far as moral values are concerned, the data demonstrated that practising Catholic students attending Catholic schools recorded higher scores than students in non-denominational schools, while sliding Catholic students recorded scores very close to those of students in non-denominational schools. Lapsed Catholic students recorded lower scores than students in non-denominational schools. Therefore, in this study, the greatest threat to moral values within Catholic secondary schools came not from the presence of non-Catholic students but from the presence of lapsed Catholic students. As far as religious values are concerned, the data demonstrated that practising Catholic students attending Catholic schools recorded higher scores than students in non-denominational schools while lapsed Catholic students recorded scores very close to those of students in non-denominational schools. Once again, the greatest threat to religious values within Catholic secondary schools came not from the presence of non-Catholic students but from the presence of lapsed Catholic students. There



was greater variability between these four groups of students within Catholic schools than between pupils at Catholic or non-denominational schools.

In the second analysis, Francis and Robbins (2005) examined the profile of year-9 and year-10 students attending Catholic secondary schools alongside the profile of students attending state-maintained schools without a religious foundation, specifically in terms of John Fisher's (1998, 2000, 2001, 2004, 2011) model of the four domains of spiritual health: personal domain, communal domain, environmental domain, and transcendental domain.

Within the personal domain, there were a number of ways in which students attending Catholic schools enjoyed the same level of spiritual health as students attending schools without a religious foundation. In terms of indicators of positive affect, there were no significant differences between the proportions of students in the two sectors who found life really worth living (69% in schools without a religious foundation and 69% in Catholic schools) and who were happy in their school (70% in schools without a religious foundation and 69% in Catholic schools). In terms of indicators of negative affect, there were no significant differences between the proportion of the students in the two sectors who felt they were not worth much as a person (14% in schools without a religious foundation and 13% in Catholic schools), and who had considered taking their own life (28% in schools without a religious foundation and 26% in Catholic schools). The striking difference between the two groups concerned the way in which students in Catholic schools were much more likely than students in schools without a religious foundation to report a sense of purpose in life. Almost two-thirds (64%) of the students attending Catholic schools felt their lives had a sense of purpose, compared with just over half (54%) in schools without a religious foundation.

Within the communal domain there were a number of ways in which students attending Catholic schools enjoyed the same level of spiritual health as students attending schools without a religious foundation. In terms of indicators of positive affect, there were no significant differences between the proportions of the students in the two sectors who found it helpful to talk about their problems with their mothers (50% in schools without a religious foundation and 49% in Catholic schools), and who found it helpful to talk about their problems with their fathers (31% in schools without a religious foundation and 33% in Catholic schools). In terms of indicators of negative affect, there were no significant differences between the proportions of the students in the two sectors who were worried about their attractiveness to the opposite sex (33% in schools without a religious foundation and 33% in Catholic

schools). Where, however, significant differences emerged between the two groups, the students in Catholic schools recorded significantly lower scores of spiritual health than the students in schools without a religious foundation. In Catholic schools, 31% of the students were worried about being bullied at school, compared with 28% in schools without a religious foundation. In Catholic schools, 54% of the students were worried about getting along with other people, compared with 49% in schools without a religious foundation.

Within the environmental domain, there were a number of ways in which students attending Catholic schools enjoyed the same level of spiritual health as students attending schools without a religious foundation. There were no significant differences between the proportions of the students in the two sectors who considered that there were too many Black people living in England (18% in schools without a religious foundation and 17% in Catholic schools), who were concerned about the risk of pollution to the environment (63% in schools without a religious foundation and 61% in Catholic schools), or who felt that there was nothing they could do to help solve the world's problems (27% in schools without a religious foundation and 27% in Catholic schools). There were, however, two indicators in this section which revealed different priorities among the students educated within the two sectors of schools. The students in Catholic schools were more likely than the students in schools without a religious foundation to be concerned about the poverty of the third world (64% compared with 57%) and less likely to be concerned about the risk of nuclear war (51% compared with 55%).

In terms of the transcendental domain, the students attending Catholic schools displayed a much higher attachment to traditional religion compared with students in non-denominational schools. In Catholic schools 71% of the students believed in God, compared with 37% in schools without a religious foundation. In spite of these large differences in belief, the differences in levels of negativity towards traditional religion were only marginally lower in the Catholic sector. In Catholic schools, 25% of the students considered the Church to be irrelevant to contemporary life, compared with 28% in schools without a religious foundation. Not only were students in Catholic schools more supportive of traditional religion, they were also more supportive of non-traditional religion. While 36% of the students in schools without a religious foundation believed in their horoscope, the proportion rose to 39% in Catholic schools. While 20% of the students in schools without a religious foundation believed fortune-tellers can tell the future, the proportion rose to 24% in Catholic schools.

### Research questions

Although the analyses of the data from the Teenage Religions and Values Survey reported by Francis (2002) and by Francis and Robbins (2005) provided valuable insights into the comparative attitudes during the 1990s of students attending Catholic secondary schools and secondary schools without a religious foundation, the kind of statistical analyses employed were not capable of demonstrating the extent to which such differences could be attributed to influences of the school rather than to influences of individual pupil religiosity. Against this background, the aim of the present study was to use multilevel linear modelling to reanalyse the Teenage Religion and Values Survey data in order to examine the contribution of Catholic secondary schools during the 1990s to students' religious, personal and social values, after allowing for the religiosity of individual pupils. The first question addressed is whether or not the differences in values previously reported between Catholic schools and those without a religious foundation can be entirely explained by the higher levels of religiosity reported by students in Catholic schools. If differences remain between school types after controlling for individual student religiosity, they might be attributable to the nature of schools and the communities they create. A second question builds on the studies that indicate the importance of understanding the different ways in which students with high levels of religiosity and students with low levels of religiosity respond to schools with a religious or non-religious foundation. Does the effect of religiosity on values differ between pupils in Catholic schools and those in schools without a religious foundation?

This new analysis complements two parallel studies on the effects of Anglican schools (Francis, Lankshear, Robbins, Village, & ap Siôn, 2014) and independent Christian schools (Francis, ap Siôn, & Village, 2014) on teenage values. Reanalysis of these data from the 1990s have been undertaken to serve two main purposes. It is properly a matter of historical interest to extend the research-based information about the contribution of Catholic schools to students' religious, personal, and social values during the 1990s. The findings of such analyses will then provide a basis on which a replication study during the present decade can build, in order to test whether the influence of Catholic schools is remaining stable over time.

## Method

### Context

The Teenage Religion and Values Survey was conducted during the 1990s to provide a detailed profile of the attitudes and values of year 9 and year 10 students throughout England and Wales (students between the ages of 13 and 15 years). A detailed questionnaire was administered throughout all year 9 and year 10 classes within 163 schools throughout England and Wales, from Pembrokeshire to Norfolk, and from Cornwall to Northumberland. A mix of rural and urban areas was included, as was a mix of independent and state-maintained schools. Within the state-maintained sector, attention was given to the balance between Roman Catholic voluntary schools, Anglican voluntary schools, and schools without a religious foundation.

### Procedure

Participating schools were asked to follow a standard procedure. The questionnaires were administered in normal class groups. Students were asked not to write their name on the booklet and to complete the inventory under examination-like conditions. Although students were given the choice not to participate, very few declined to do so. They were assured of confidentiality and anonymity. As a consequence of this process, thoroughly completed questionnaires were processed for 33,982 students (Francis, 2001).

### Instrument

The questionnaire used in this study is a revision of the Centymca Attitude Inventory previously employed by Francis (1982a, 1982b, 1984a, 1984b) and Francis and Kay (1995). Alongside a range of broad background and demographic variables, the instrument was designed to profile values over a number of areas, with each area assessed by a pool of items designed for Likert scaling (see Likert, 1932). Students were required to grade their agreement with each statement on a five-point scale anchored by *strongly agree*, *agree*, *not certain*, *disagree*, and *disagree strongly*. From the revised Centymca Attitude Inventory, three main groups of variables were selected to serve in the analyses as dependent variables, as religious predictor variables, and as control variables, alongside the key independent variable of school type, recorded as Roman Catholic schools and as schools without a religious foundation. A

number of recent studies have reported on the reliability and validity of these instruments (Francis, ap Siôn, & Village, 2014; Francis, Lankshear, et al., 2014).

**Dependent variables.** Six multi-item scales (identified in Table 1) accessed attitudes toward six key constructs: scale of low self-esteem (four items); scale of rejection of drug use (six items); scale of endorsing age-related illegal behaviours (six items); scale of racism (four items); scale of positive attitude toward school (six items); and scale of conservative Christian belief (five items). Additionally five items accessed views on sexual morality (abortion, contraception, divorce, homosexuality and sex outside marriage). Those five items, which did not form a unidimensional scale, were coded so that a high score indicated opposition.

**Control variables.** Three groups of control variables took into account personal, contextual, and psychological factors. The personal factors were sex (male and female) and school year (year 9 and year 10). The contextual factors were father in full-time employment, mother in full-time employment, academic expectations (going to university or not going to university), location of home (rural or not rural), and parental social class calculated on the basis of the classifications prepared by the Office for Population, Censuses and Surveys (1980), using the mean for both parents where available, or otherwise based on a single parent. The psychological factors were measured by the short form of the Junior Eysenck Personality Questionnaire (JEPQ-S, Francis & Pearson, 1988). This instrument comprises four 6-item measures of the three major dimensions of personality (extraversion, neuroticism, and psychoticism), together with the lie scale.

**Religious predictor variables.** Religion was assessed by four variables: self-assigned religious affiliation, public religious practice (church attendance), personal religious practice (personal prayer), and religious belief (belief in God). Self-assigned religious affiliation was employed as a dummy variable (religious affiliation, no religious affiliation). Church attendance was assessed on a five-point scale (*never, once or twice a year, sometimes, at least once a month, and nearly every week*). Personal prayer was assessed on a five-point scale (*never, occasionally, at least once a month, at least once a week, and nearly every day*). Belief in God was assessed on a five-point scale (*agree strongly, agree, not certain, disagree, disagree strongly*).

## Analysis

A multilevel linear model was used to allow for the fact that students were grouped within schools, and to test interactions between school-level and pupil-level variables (Bickel, 2007; Bryk & Raudenbush, 1992; Hox, 2002; Snijders & Bosker, 1999). Each school was given a unique numerical code and this was employed as the subject (grouping variable) using the mixed-model procedure of SPSS version 19 (Norusis, 2011). All independent variables were grand-mean centred. Three models were run for each dependent variable. Model 0, the null model, had no predictor variables, and indicated the proportion of the overall variation in the dependent variable that could be explained by differences between schools (the Intraclass Correlation Coefficient, ICC). In Model 1, school type was entered along with all the “non-religious” control variables. This model assessed whether the dependent variable differed between Roman Catholic schools and schools without a religious foundation, after allowing for personal, contextual and psychological differences between students. Adding school type as a predictor would be expected to lower the ICC if much of the variation between schools was due to their religious or non-religious foundation. Because differences between types of schools may have been due to Roman Catholic schools having a higher proportion of religious students, Model 2 included the four predictors of religiosity alongside the other control variables and school type. Differences between school types that remained after controlling for individual differences in student religiosity were interpreted as effects of Roman Catholic schools on their students. In addition to main effects, Model 2 also included as an interaction term school type(school-level)\*belief in God(individual-level) in order to test the idea that the effect of a pupil being religious on the dependent variable differed for pupils in Catholic schools compared with those in schools without a religious foundation.

## Sample

Drawing on the Teenage Religion and Values Survey data, the present analysis employs information provided by 1,948 students from 10 Catholic schools within the state-maintained sector and 20,348 students from 93 schools without a religious foundation within the state-maintained sector. These proportions reflect the fact that during the 1990s roughly 10% of state-maintained schools had a Catholic foundation and 85% had no religious foundation.

## Results and Discussion

The first stage of data analysis examined the properties of the dependent variables including measures of low self-esteem, rejection of drug use, endorsing age-related illegal behaviours, racism, positive attitude toward school, conservative Christian belief, and sexual morality. Table 1 presents the item endorsement (in terms of the sum of the *agree strongly* and the *agree* responses) and the item rest of scale correlation (in terms of the correlation between the individual item and the sum of the other items within the proposed scale). Six of these seven sets of items demonstrated sufficiently high internal consistency reliability, in terms of the alpha coefficient (Cronbach, 1951) and the item rest of scale correlations, to score as acceptable cumulative measures. The seventh set of items, concerning sexual morality, generated an alpha coefficient of .56, well below the threshold of acceptability of .65 proposed by DeVellis (2003). These five items were therefore employed as single-item measures rather than as a cumulative scale. Subsequent analyses were conducted on eleven dependent measures, six scales (concerning low self-esteem, rejection of drug use, endorsing illegal behaviours, racism, positive attitude toward school, and conservative Christian belief) and five single items (concerning abortion, contraception, divorce, homosexuality, and sex outside marriage).

The second stage of data analysis compared the mean dependent variable scores of students attending Catholic schools with those of students attending schools without a religious foundation. (See Table 2.) In view of the large size of the sample and the multiple use of bivariate significance testing, attention will be drawn only to those differences that achieved at least the one percent probability level. Overall, students in Catholic schools had higher self-esteem, lower levels of racism, a less positive attitude toward school, and higher levels of conservative Christian belief. In terms of the items concerning sexual morality, the students in Catholic schools were less accepting of abortion, contraception, divorce, homosexuality, and sex outside marriage. Effect sizes were estimated using Pearson correlation coefficients ( $r$ ), which suggested that even when differences were statistically significant they were small in practical terms. Nonetheless, these data demonstrate an overall average difference between the two types of schools, though it is not possible to tell from this analysis if this is a genuine school effect on the consequence of Catholic schools recruiting students with higher levels of religiosity. The next task was to explore the extent to which students in the two types of school varied according to the control variables.

Table 1

*Dependent variables: Item and scale properties*

	IRC	%E
<i>Scale of low self-esteem</i> (4 items, $\alpha = .66$ )		
I feel my life has a sense of purpose <sup>†</sup>	.40	46
I find life really worth living <sup>†</sup>	.52	68
Sometimes I considered taking my own life	.41	27
I feel I am not worth much as a person	.46	13
<i>Scale of rejection of drug use</i> (6 items, $\alpha = .71$ )		
It is wrong to sniff glue	.42	77
It is wrong to use marijuana	.47	50
It is wrong to become drunk	.34	18
It is wrong to sniff butane gas	.45	72
It is wrong to smoke cigarettes	.44	41
It is wrong to use heroin	.51	72
<i>Scale of endorsing age-related illegal behaviour</i> (6 items, $\alpha = .74$ )		
There is nothing wrong in shop lifting	.45	7
There is nothing wrong in buying cigarettes under age	.54	30
There is nothing wrong in travelling without a ticket	.48	21
There is nothing wrong in cycling without lights	.39	17
There is nothing wrong in buying alcohol under age	.57	42
It is wrong to have sex under age <sup>†</sup>	.43	22
<i>Scale of racism</i> (4 items, $\alpha = .60$ )		
Some of my best friends are black <sup>†</sup>	.40	23
I have friends who are black <sup>†</sup>	.43	64
There are too many black people in this country	.40	14
Immigration should be restricted	.30	28
<i>Scale of positive attitude toward school</i> (6 items, $\alpha = .68$ )		
I am happy in my school	.53	71
I like the people I go to school with	.27	89
My school is in a boring place <sup>†</sup>	.32	31
School is boring <sup>†</sup>	.55	37
Teachers do a good job	.45	43
My school helps prepare me for life	.40	68
<i>Scale of conservative Christian belief</i> (5 items, $\alpha = .83$ )		
I believe Jesus Christ is the son of God	.72	47
I believe Jesus really rose from dead	.76	30
God made the world in six days and rested on the seventh	.67	19
Christianity is the only true religion	.45	15
God punishes wrongdoers	.51	19
<i>Items concerning sexual morality</i>		
Abortion is wrong	.30	37
Contraception is wrong	.35	6
Divorce is wrong	.39	19
Homosexuality is wrong	.26	36
It is wrong to have sex outside marriage	.33	14

Note:  $\alpha$  = Cronbach's alpha; IRC = Item-rest of scale correlation; %E = percentage endorsement of the item. <sup>†</sup> These items were reverse coded.  $N = 22296$ .



Table 2

*Dependent variables: Comparisons between school types*

	Catholic		Non-religious		<i>t</i>	<i>r</i>
	<i>N</i> = 1,948		<i>N</i> = 20,348			
	Mean	SD	Mean	SD		
Scale of low self-esteem	8.97	3.19	9.17	3.17	2.71**	.02
Scale of rejection of drug use	20.74	4.78	20.79	4.92	0.44	.00
Scale of age-related illegal behaviours	15.73	4.86	15.68	4.83	0.46	.00
Scale of racism	10.35	3.19	10.58	3.19	2.84**	.02
Scale of positive attitude toward school	20.81	4.02	21.09	4.06	2.79**	.02
Scale of conservative Christian belief	16.37	4.09	13.84	4.53	25.40***	.16
Item on abortion <sup>†</sup>	3.63	1.35	3.09	1.35	16.72***	.11
Item on contraception <sup>†</sup>	2.11	1.09	1.88	1.02	8.65***	.06
Item on divorce <sup>†</sup>	2.67	1.24	2.48	1.16	6.15***	.04
Item on homosexuality <sup>†</sup>	3.14	1.42	3.01	1.40	3.79***	.03
Item on sex outside marriage <sup>†</sup>	2.18	1.26	2.02	1.19	5.22***	.04

Note: <sup>†</sup> for these items high score indicated a negative attitude

\*\*  $p < .01$ ; \*\*\* $p < .001$

The third stage of data analysis (see Table 3) examined the scale properties of the four measures of the Junior Eysenck Personality Questionnaire and compared the mean scores of the students attending Catholic schools with those of students at schools without a religious foundation. The alpha coefficients indicated that the extraversion and neuroticism scales achieved satisfactory levels of internal consistency reliability. While the psychoticism and lie scales had lower reliabilities, they were nonetheless consistent with the general findings for this instrument (Francis & Pearson, 1988; Francis, Brown, & Philipchalk, 1992). The *t*-tests demonstrated that, on average, students in Catholic schools recorded very slight, but statistically significant, higher neuroticism scores, but there were no significant differences in extraversion, psychoticism or lie scale scores. Such differences in neuroticism scores may partly explain the differences in the dependent variables recorded by students attending the two types of schools.

Table 3

*Eysenck's personality measures: Scale properties and comparisons between school types*

		Catholic		Non-religious				
		<i>N</i> = 1,948		<i>N</i> = 20,348				
	N items	Alpha	Mean	SD	Mean	SD	<i>t</i>	<i>r</i>
Extraversion	6	.68	4.63	1.47	4.58	1.53	1.43	.01
Neuroticism	6	.69	3.46	1.77	3.32	1.83	3.17**	.02
Psychoticism	6	.61	1.64	1.41	1.57	1.44	1.94	.01
Lie scale	6	.58	2.26	1.54	2.26	1.55	0.05	.00

Note: \*\*  $p < .01$ .

The fourth stage of data analysis examined the control variables that employed dichotomous data: two personal factors (sex and school year), four contextual factors (father in full-time employment, mother in full-time employment, rural location of home, and academic expectation to attend university), and one religious factor (self-assigned religious affiliation). (See Table 4.) Percentages are reported in respect of the students attending Catholic schools and the students attending schools without a religious foundation.

Table 4

*Dichotomous control variables: Comparisons between school types*

	Catholic		<i>χ</i> <sup>2</sup>
	<i>N</i> = 1,948	<i>N</i> = 20,348	
	%	%	
<i>Personal factors</i>			
sex (proportion female)	47.9	49.8	2.40
school year (proportion year 10)	46.7	46.7	0.00
<i>Contextual factors</i>			
father in full-time employment	77.8	82.6	26.67***
mother in full-time employment	40.7	38.1	4.94*
rural location of home	27.7	39.0	94.03***
expects to go to university	58.2	53.3	16.43***
<i>Religious factors</i>			
Self-assigned religious affiliation as 'none'	13.1	58.0	1390.17***

Note: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Taking the 1% probability level as the threshold, the chi-square tests demonstrated that the composition of the students within the two types of schools did not differ in terms of personal factors (sex and age). There were, however, significant differences in terms of contextual and religious factors. In Catholic schools, lower proportions of students had fathers in full-time employment or lived in rural locations, but higher proportions of students expected to attend university or identified themselves as religiously affiliated.

The fifth stage of data analysis examined the control variables that employed continuous data: one contextual factor (parental social class) and three religious factors (church attendance, personal prayer, and belief in God). The t-tests demonstrated that, on average, students in Catholic schools came from lower social class backgrounds and displayed higher levels of church attendance, personal prayer, and belief in God. (See Table 5.)

Table 5

*Continuous control variables: Comparisons between school types*

	Catholic		Non-religious		<i>t</i>	<i>r</i>
	<i>N</i> = 1,948		<i>N</i> = 20,348			
	Mean	SD	Mean	SD		
<i>Contextual factors</i>						
parental social class	3.59	0.90	3.46	0.91	5.74***	.04
<i>Religious factors</i>						
frequency of church attendance	3.40	1.51	1.92	1.28	41.00***	.31
frequency of personal prayer	2.76	1.51	1.82	1.20	26.03***	.21
belief in God	3.98	1.08	3.07	1.30	34.23***	.20

Note: \*\*\**p* < .001

The sixth stage of data analysis employed multi-level linear models to allow for the fact that students were grouped within schools and to take into account the influence of the personal, contextual and religious control variables. In respect of each of the dependent variables three models were tested. The null model (Model 0) had no predictor variables, and indicated the amount of variation in the dependent variable that was linked to differences between schools. Model 1 controlled for the personal factors (sex and school

year), for the contextual factors (father in full-time employment, mother in full-time employment, academic expectations, location of home, and parental social class), and for the psychological factors (extraversion, neuroticism, psychoticism, and the lie scale). Model 2 controlled additionally for the religious factors (self-assigned religious affiliation, public religious practice, personal religious practice, and belief in God). Table 6 presents the three models for three multi-item scales: low self-esteem, rejection of drug use, and endorsing illegal behaviour. Table 7 presents the three models for the other three multi-item scales: racism, positive attitude toward school, and conservative Christian belief. Table 8 presents the three models for the five items on sexual morality: abortion, contraception, divorce, homosexuality, and sex outside marriage. (Tables 6, 7, and 8 can be found at the end of this article.)

The results in these tables indicated that personal, contextual and psychological factors all played a role in shaping individual differences on the dependent variables, confirming the wisdom of taking these factors into account. According to Model 1, after taking into account such factors, attending a Catholic school predicted better self-esteem, more conservative Christian belief and greater opposition to abortion, contraception, divorce, and sex outside marriage.

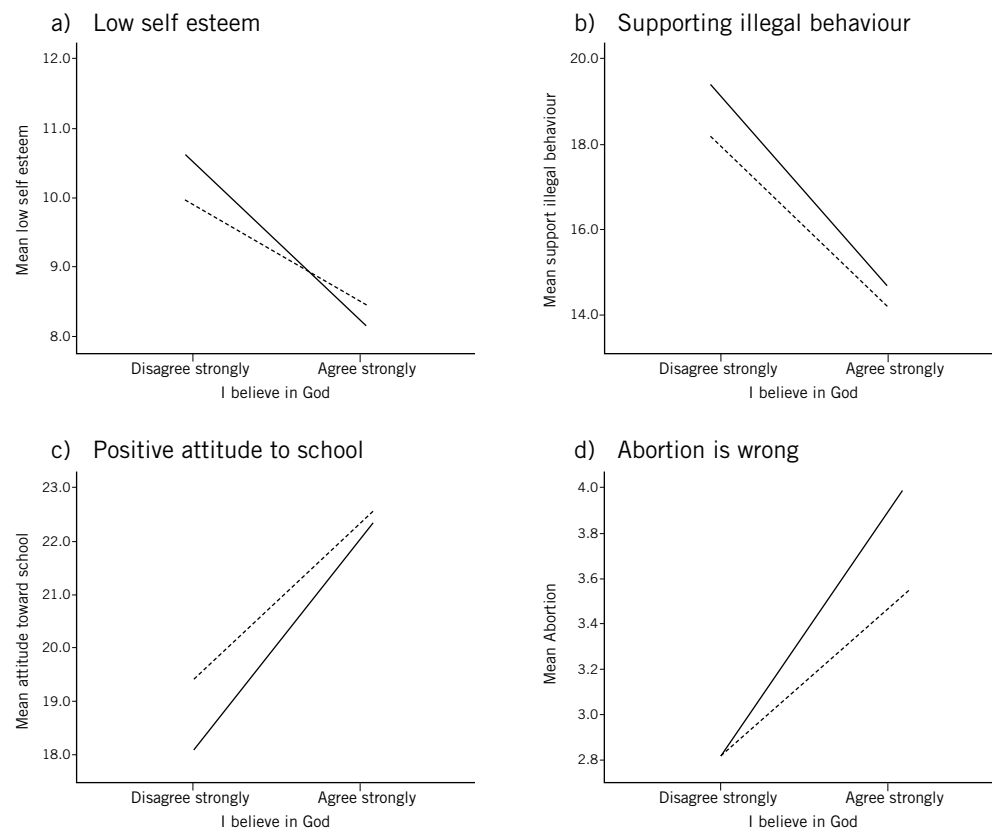
According to Model 2, after taking into account the religious factors, attending a Catholic school had an effect on some variables but not on others. For opposition to racism and homosexuality there were no differences between school types and this remained so after controlling for religious variables. Attitudes in these two areas seemed to be similar in Catholic schools and in schools without a religious foundation, and the greater average religiosity of students in Catholic schools had little influence on these attitudes. In other cases, controlling for religiosity removed a significant difference between school types. This was true for doctrinal beliefs, and for opposition to contraception, divorce, and sex outside marriage. In these cases the overall difference between students in Catholic schools and in schools without a religious foundation was explained by the greater average religiosity of students in Catholic schools. Students of similar religiosity in Catholic schools and in schools without a religious foundation are predicted to have similar attitudes or beliefs in these areas.

For some variables (opposition to drug use, endorsing age-related illegal behaviours, and attitude toward school), adding religiosity increased the difference between school types, in some cases reversing the direction of the difference. For the measure concerning endorsing age-related illegal behav-

aviours, for example, there was a small negative difference between school types before controlling for religiosity, implying that students in Catholic schools were slightly, but not significantly less likely to endorse age-related illegal behaviours. After controlling for religiosity, however, the difference was positive and significant, suggesting that among students of the same religiosity, those in Catholic schools were more likely to endorse age-related illegal behaviours than those in schools without a religious foundation.

Insight into some of these results can be gained from examining the interaction of school type and religiosity (measured in this case by belief in God). This cross-level interaction term was statistically significant for low self-esteem, endorsing age-related illegal behaviours, attitude toward school, and opposition to abortion, indicating that the effect of religiosity on these values may vary in the two types of school.

Figure 1 Interaction effects of belief in God and school type for Roman Catholic schools (solid line) and schools without a religious foundation (broken line)



Among non-believers, self-esteem was lower in Catholic schools than in schools without a religious foundation, but among believers it was higher in Catholic schools than in schools without a religious foundation (Figure 1a). It appeared that self-esteem may be partly linked to whether or not students are aligned with the prevailing religious belief (or unbelief) of students in their school, with those who hold minority views having slightly lower self-esteem. Supporting illegality increased with declining belief in God in both Catholic and community schools, but this increase was significantly more pronounced in Catholic schools, suggesting that non-believing students in Catholic schools may be exhibiting a particularly pronounced rebellion against accepted norms (Figure 1b). For attitude toward school, believing students from both types of school had equally high positive attitude towards their school. Attitude toward school became less positive as belief declined, but especially so for students in Catholic schools, again suggesting that non-believing students in Catholic schools have more difficulty in fitting into school than their counterparts in schools without a religious foundation (Figure 1c). For abortion, the difference between school types was apparent only among those who held belief in God (where students at Catholic schools were more opposed to abortion than believers at schools without a religious foundation), and non-believers in both types of school showed an equal acceptance of abortion (Figure 1d). Overall, these interactions indicate that some values held by individual students may depend partly on how their religious faith compares with the norm for their school.

### Conclusion

The present study set out to examine whether attendance at a Catholic secondary school during the 1990s exerted detectable impact on year 9 and year 10 students' (between 13 and 15 years of age) religious, personal, and social values. The research question was operationalized by drawing on data from the Teenage Religion and Values Survey as reported by Francis (2001), by identifying a set of 11 specific measures of religious, personal, and social values, by taking into account a set of control variables specifying personal, contextual, psychological, and religious factors, and by employing multilevel linear models to take into account the nesting of students within schools. This approach assumed that differences between school types remaining after controlling for the specified personal, contextual, psychological and religious factors could be attributable to the effect of Catholic schools on their students.

The main findings from these analyses are that the effects of Catholic schools during the 1990s on their students' values differed according to the value domains considered and also according to the religious status of individual students. Catholic schools impacted believing students and unbelieving students in different ways in respect of different value domains. The data suggest that within the topics covered by the current analyses, there were four discernible groups of values that were impacted by Catholic schools in distinctive ways.

The first group of values is represented in the survey by racism and opposition to homosexuality. For these variables there were no overall significant differences between students in Catholic schools and students in schools without a religious foundation, and this finding persisted after controlling for the concentration of religious students in Catholic schools. These may be core values that were shaped predominately by beliefs and values in society at large and are less influenced by individual religiosity or by religious schooling.

The second group of values is represented in the survey by self-esteem, conservative Christian belief, opposition to contraception, and opposition to sex outside marriage. In all of these areas there appears to have been an effect exerted by Catholic schools until the concentration of religious students in Catholic schools is taken into account. In other words, these may be core values that were shaped by the religious beliefs and allegiances of individual students, irrespective of the type of school that they attend.

The third group of values is represented in the survey by opposition to abortion. Like opposition to contraception, opposition to divorce and opposition to sex outside marriage, in the first model (controlling for personal factors, for contextual factors, and for psychological factors) there appeared to be an effect exerted by Catholic schools on opposition to abortion. However, unlike the variables related to sex or marriage, the effect of Catholic schools on opposition to abortion persisted after allowing for individual religiosity. Opposition to abortion has been one of the hallmarks of Catholic identity in England and Wales over the last few decades, and perhaps this more than any other single value is where Catholic schools may be expected to influence their students' beliefs. The really interesting feature of the second model is the significance of the interaction term between religiosity and school type, indicating that it is primarily among students in Catholic schools who believe in God that the greater opposition to abortion is apparent. Non-believing students in Catholic schools have similar beliefs on abortion to non-believing pupils in other schools.

The fourth group of values is represented by rejection of drug use, endorsing age-related illegal behaviours, and attitude toward school. In the first model (controlling for personal, contextual and psychological factors) there appeared to be no effect exerted by Catholic schools in respect of this group of values. However, in the second model, controlling for religiosity revealed a school-type effect that was not visible in the first model. In the case of endorsing age-related illegal behaviours and attitude toward school, this was apparently because the disaffection of non-religious students in Catholic schools was otherwise masked by the generally greater religiosity of their fellow students. This indicates that religious belief may have both an absolute effect on values, and one that is relative to the prevailing values of the schools that students attend. In particular, being non-religious in a Catholic school seems to be associated with lower self-esteem, greater endorsing of age-related illegal behaviours and a more negative attitude toward school than among non-religious students in schools without a religious foundation. Catholic schools may need to work particularly hard with this group of students to avoid possible detrimental effects on their socialization within the school community and beyond.

The purpose for re-visiting the Teenage Religion and Values data from the 1990s in the present study was twofold. The first purpose was to draw on the largest database currently available within England and Wales capable of testing the contribution of Roman Catholic secondary schools to students' religious, personal and social values. The second aim was to establish a foundation analysis from the 1990s against which findings from a subsequent replication study could be compared. The findings from the 1990s confirm the interest and value in now organising such a replication study.

There are, however, clear limitations with the present study. The first limitation concerns the fact that only ten Catholic schools were included in the survey. When the database was originally established the aim was to have the same weight of Catholic schools in the sample as in the state-maintained sector of education in England and Wales. A future replication study could address this problem by oversampling Catholic schools. The second limitation concerns the relatively restricted range of dependant variables employed in the study against which school effects were assessed. A future replication study would address this problem by extending the range of variables employed.



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Table 6

*Multilevel linear models of three value scales (self esteem, drug use, and illegal behaviour) in relation to school type, controlling for religiosity*

	Low self-esteem				Rejection of drug use				Endorsing illegal behaviour			
	Model				Model				Model			
	0	1	2		0	1	2		0	1	2	
Intercept	9.16***	9.87***	9.78***		20.81***	19.68***	19.83***		15.68***	16.42***	16.26***	
Male (female)		-0.35***	-0.41***			0.73***	0.83***			0.11	-0.01	
Year 9 of school (10)		0.13**	0.15***			0.64***	0.60***			-0.74***	-0.69***	
Father in full-time work		-0.38***	-0.38***			0.29***	0.28***			-0.24**	-0.23**	
Mother in full-time work		0.12**	0.09*			-0.14*	-0.09			0.25***	0.18**	
Living in village		0.00	-0.01			-0.15*	-0.14*			0.15*	0.14*	
Expecting university		-0.56***	-0.51***			0.57***	0.47***			-0.67***	-0.53***	
Extraversion		-0.34***	-0.34***			-0.27***	-0.28***			0.35***	0.35***	
Neuroticism		0.75***	0.75***			-0.04*	-0.05**			0.08***	0.10***	
Lie scale		-0.15***	-0.10***			0.61***	0.53***			-0.87***	-0.78***	
Psychoticism		0.26***	0.23***			-0.90***	-0.85***			0.98***	0.93***	
Parental class		0.25***	0.23***			0.02	0.06			0.15***	0.08*	
Religiously affiliated			0.11*				-0.17*				0.12	
Church attendance			-0.02				0.07*				-0.26***	
Belief in God			-0.29***				0.42***				-0.33***	
Prayer frequency			-0.01				0.05				-0.08**	
RC*Belief in God			-0.23***				0.15				-0.24**	
Roman Catholic schools		-0.34***	0.19			-0.03	-0.75*			-0.15	0.86**	
ICC	1.1%	0.7%	0.5%		4.2%	4.5%	4.0%		4.0%	3.7%	3.2%	

Note: Table gives unstandardized parameter estimates. Reference categories are in parentheses. ICC= Intraclass Correlation Coefficient. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Table 7

*Multilevel linear models of three value scales (racism, attitude to school, and conservative Christian belief) in relation to school type, controlling for religiosity*

	Racism				Attitude to school				Conservative Christian belief			
	Model				Model				Model			
	0	1	2	0	1	2	0	1	2	0	1	2
Intercept	10.59***	10.14***	10.09***	20.98***	20.22***	20.34***	14.10***	13.93***	14.26***			
Male (female)		1.18***	1.13***		-0.01	0.07		-0.39***	0.05			
Year 9 of school (10)		-0.04	-0.02		0.22***	0.19***		0.28***	0.09*			
Father in full-time work		0.08	0.08		0.28***	0.27***		0.11	0.06			
Mother in full-time work		-0.16***	-0.18***		-0.05	0.00		-0.26***	0.00			
Living in village		0.08	0.07		-0.07	-0.06		-0.07	0.01			
Expecting university		-0.29***	-0.25***		0.91***	0.83***		0.01	-0.41***			
Extraversion		-0.20***	-0.20***		0.28***	0.27***		0.09***	0.03*			
Neuroticism		-0.02	-0.01		-0.33***	-0.35***		0.16***	0.09***			
Lie scale		0.01	0.04**		0.59***	0.52***		0.61***	0.21***			
Psychoticism		0.24***	0.22***		-0.61***	-0.57***		-0.27***	-0.02			
Parental class		0.10***	0.07**		-0.20***	-0.16***		0.03	0.21***			
Religiously affiliated			0.03			-0.12			-0.14**			
Church attendance			-0.07***			0.04			0.20***			
Belief in God			-0.11***			0.39***			2.34***			
Prayer frequency			-0.07***			0.02			0.25***			
RC*Belief in God			0.03			0.32***			0.02			
Roman Catholic schools		-0.15	0.11		-0.20	-0.95***		2.54***	-0.16			
ICC	7.7%	7.1%	7.4%	2.9%	2.6%	2.6%	6.6%	3.5%	1.7%			

Note: Table gives unstandardized parameter estimates. Reference categories are in parentheses. ICC= Intraclass Correlation Coefficient. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .

Table 8

*Multilevel linear models of five value items (abortion, contraception, divorce, homosexuality, and sex outside marriage) in relation to school type, controlling for religiosity*

	Abortion					Contraception					Divorce				
	Model					Model					Model				
	0	1	2	0	1	2	0	1	2	0	1	2	0	1	2
Intercept	3.15***	3.31***	3.29***	1.91***	1.80***	1.77***	2.51***	2.41***	2.43***						
Male (female)		-0.10***	-0.08***		0.32***	0.33***		0.25***	0.28***						
Year 9 of school (10)		0.17***	0.16***		0.29***	0.29***		0.08***	0.06***						
Father in full-time work		-0.15***	-0.15***		-0.11***	-0.11***		0.01	0.01						
Mother in full-time work		-0.02	0.00		-0.02	-0.02		-0.03*	-0.02						
Living in village		-0.04	-0.04		0.01	0.01		0.00	0.01						
Expecting university		-0.20***	-0.23***		-0.26***	-0.26***		-0.16***	-0.19***						
Extraversion		0.03***	0.02***		-0.04***	-0.05***		-0.02**	-0.02**						
Neuroticism		0.03***	0.03***		-0.01*	-0.01*		0.02***	0.01**						
Lie scale		0.08***	0.05***		0.08***	0.08***		0.10***	0.08***						
Psychoticism		-0.06***	-0.04***		0.01	0.01*		-0.01	0.00						
Parental class		0.11***	0.13***		0.08***	0.08***		0.04***	0.05***						
Religiously affiliated			0.06**			0.07***			0.00						
Church attendance			0.05***			0.02**			0.05***						
Belief in God			0.11***			0.02***			0.06***						
Prayer frequency			0.02**			0.01			0.06***						
RC*Belief in God			0.10**			0.03			0.03						
Roman Catholic schools		0.54***	0.30**		0.21***	0.15**		0.18***	-0.04						
ICC	5.6%	3.0%	2.8%	3.9%	2.4%	2.3%	1.5%	0.9%	0.7%						

Table 8 (cont.)

*General attitudes and behaviour in relation to school type and religiosity*

	Homosexuality			Sex outside marriage		
	Model			Model		
	0	1	2	0	1	2
Intercept	3.06***	2.76***	2.78***	2.05***	2.08***	2.10***
Male (female)		0.84***	0.86***		0.02	0.06***
Year 9 of school (10)		0.04	0.03		0.10***	0.08***
Father in full-time work		-0.01	-0.01		-0.06**	-0.06**
Mother in full-time work		-0.09***	-0.08***		-0.08***	-0.06***
Living in village		-0.01	-0.01		-0.02	-0.02
Expecting university		-0.23***	-0.24***		-0.08***	-0.12***
Extraversion		-0.01	-0.01		-0.08***	-0.09***
Neuroticism		-0.04***	-0.04***		-0.03***	-0.03***
Lie scale		0.06***	0.05***		0.16***	0.13***
Psychoticism		0.06***	0.07***		-0.07***	-0.06**
Parental class		0.06***	0.07***		0.01	0.03**
Religiously affiliated			-0.02			0.03
Church attendance			0.00			0.09***
Belief in God			0.05***			0.08***
Prayer frequency			0.02*			0.10***
RC*Belief in God			0.00			-0.04
Roman Catholic schools		0.12	0.06		0.19**	-0.06
ICC	4.0%	2.4%	2.2%	2.5%	1.7%	1.1%

Note: Table gives unstandardized parameter estimates.

Reference categories are in parentheses.

ICC= Intraclass Correlation Coefficient. \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$ .