

AGE, SEX, INTELLIGENCE AND RELIGIOUS BELIEFS IN 11- to 15-YEAR OLD PUPILS

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This study examines the influence of age, sex and intelligence on the religious beliefs of 120 pupils aged 11 to 15 years attending a Welsh Catholic comprehensive school. The pupils were administered the Raven's Progressive Matrices Test and a religious belief questionnaire. A clear tendency for religious uncertainty to be correlated with growing age was detected. Although sex was not a significant factor in the younger age group, the tendency of girls to hold firmer beliefs became quite clear in the older group when boys tended to become increasingly uncertain and critical. Intelligence appears to exercise a subtle influence on religious belief in that it influences some beliefs more than others and the existence of a sex related factor with older and more intelligent girls remaining firm in their beliefs was another finding of the investigation.

In their study of age trends associated with religious belief in Catholic and non Catholic pupils, aged between 12 and 18 years, Kuhlen and Arnold (7) detected greater tolerance of religious belief with age. Their findings do not support the view that adolescence is generally a time of increased doubts. They also found that Catholics 'wonder about' beliefs less than non Catholics. Other investigators (3, 4, 6, 9) have reported less favourable attitudes towards religion with age, though at the sixth form level, Wright (10) found a slightly more favourable, though still critical, attitude. Evidence that girls are better disposed towards religious belief than are boys has been presented in a number of investigations (1, 6, 9, 4). One study by Bonnardel (2) found a relationship between comprehension of religious material and level of formal education, the study, however, did not include precise measures of levels of verbal ability or intelligence. Several studies (3, 6, 9, 10) support the view that religious interest and understanding are greater among those with higher levels of intelligence and formal education.

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The present study is an extension of the work carried out by Kuhlen and Arnold (7), who, however, studied age trends only. Its purpose is to examine the relationship between age, sex and intelligence and religious beliefs of Catholic children living in South Wales and attending a Catholic comprehensive school.

METHOD

Instruments

(i) Raven's Progressive Matrices Test (8), a test of non-verbal intelligence
(ii) Religious Beliefs Questionnaire, based on that of Kuhlen and Arnold (7), with seven additional statements which seem of special relevance to the beliefs of the Catholic Church, and which relate to contemporary changes and issues in the Church. It consists of 25 statements on specific religious beliefs to which the pupils are asked to indicate 'believe', 'not believe', or 'uncertain' (cf Appendix)

Sample

The sample comprised 120 pupils, divided into age-groups, drawn from a Catholic comprehensive school. One group consisted of 11 to 12 year olds in Form 1 (n 60, mean age 142 months, SD 4 13), the second consisted of 14 to 15-year olds in Form 4 (n 60, mean age 173 36 months, SD 9 30). There was an equal number of boys and girls in each group, and there was no significant sex difference within each group as regards age.

The entire sample covered an IQ range between 75 and 125. The group mean (and standard deviation) for intelligence for the 11 to 12 year olds was 104 25 (SD 15 69), that for the 14 to 15-year olds was 101 76 (SD 13 48). There was no significant mean IQ difference between the groups as a whole, neither were mean IQ differences between boys and girls of the same age or of different ages statistically significant.

Procedure

The Raven's Progressive Matrices Test and the Religious Beliefs Questionnaire were administered to class groups on the same occasion. For the purpose of distinguishing levels of intelligence, the top and bottom thirds were identified.

RESULTS AND DISCUSSION

Table 1 indicates trends which suggest an increasing uncertainty with age concerning the existence of God, a discarding of belief in a vengeful God, a greater independence with regard to attending the same church as one's

parents or the necessity to attend regularly, some scepticism about whether church-goers are superior to non-church goers and an increasing reluctance to connect prayer with good people. There is also an increasing uncertainty concerning the hereafter and the literal truth of the Bible. There is a tendency among the older group to value material things, though in both age groups there was an equal recognition of the possibility that goodness could be characteristic of any person, Christian or non Christian.

TABLE 1

FREQUENCY OF RESPONSES OF PUPILS (N 120) TO QUESTIONNAIRE ITEMS

| Category | Item | 11 to 12 year olds (N=60) | | | 14 to 15 year olds (N=60) | | | χ^2 |
|---------------|------|---------------------------|---------|-----------|---------------------------|---------|-----------|----------|
| | | Not Believe | Believe | Uncertain | Not Believe | Believe | Uncertain | |
| God | 1 | 52 | 0 | 8 | 39 | 1 | 20 | |
| | 2 | 29 | 7 | 24 | 36 | 7 | 17 | 2.94 |
| | 3 | 34 | 14 | 12 | 4 | 36 | 20 | 34.20*** |
| Church | 4 | 13 | 30 | 17 | 3 | 54 | 3 | 22.80*** |
| | 5 | 37 | 14 | 9 | 24 | 28 | 8 | 7.48* |
| | 6 | 57 | 2 | 1 | 45 | 11 | 4 | 9.40** |
| | 7 | 27 | 17 | 16 | 34 | 19 | 7 | 4.42 |
| Prayer | 8 | 33 | 19 | 8 | 17 | 34 | 9 | 8.34* |
| | 9 | 30 | 5 | 25 | 25 | 10 | 25 | 1.42 |
| | 10 | 44 | 1 | 15 | 45 | 5 | 10 | |
| | 11 | 43 | 4 | 13 | 38 | 12 | 10 | 4.38 |
| The Hereafter | 12 | 32 | 4 | 24 | 17 | 16 | 27 | 12.34** |
| | 13 | 16 | 28 | 16 | 18 | 44 | 8 | 6.30* |
| | 17 | 36 | 9 | 15 | 25 | 15 | 20 | 4.18* |
| | 18 | 55 | 2 | 3 | 38 | 8 | 14 | 13.10** |
| | 20 | 41 | 3 | 16 | 27 | 8 | 25 | 7.10* |
| Bible | 14 | 27 | 18 | 15 | 11 | 35 | 14 | 12.28** |
| | 15 | 58 | 0 | 2 | 54 | 2 | 4 | |
| | 16 | 21 | 18 | 21 | 11 | 40 | 9 | 16.26** |
| Sin | 21 | 14 | 35 | 11 | 3 | 52 | 5 | 12.66** |
| | 22 | 46 | 6 | 8 | 33 | 18 | 9 | 8.16* |
| Miscellaneous | 19 | 42 | 3 | 15 | 25 | 21 | 14 | 17.72*** |
| | 23 | 14 | 28 | 18 | 9 | 47 | 4 | 34.04*** |
| | 24 | 43 | 6 | 11 | 52 | 4 | 4 | 4.51 |
| | 25 | 44 | 3 | 13 | 42 | 8 | 10 | 2.71 |

*** p < .001

** p < .01

* p < .05

These trends give some support to the findings of Glassey (4) in relation to children generally and of Hyde (6) in relation to older secondary modern school boys

TABLE 2

FREQUENCY OF RESPONSES PRODUCING SIGNIFICANT χ^2 VALUES
FOR GIRLS AND BOYS (30 GIRLS AND 30 BOYS AT EACH AGE LEVEL)

| Item | Girls | | Boys | | χ^2 | $p <$ |
|---------------------------|---------|---------------------------|---------|---------------------------|----------|-------|
| | Believe | Not Believe/ Uncertain | Believe | Not Believe/ Uncertain | | |
| <u>11 to 12 year olds</u> | | | | | | |
| 17 | 23 | 7 | 13 | 17 | 5.62 | .05 |
| 22 | 19 | 11 | 27 | 13 | 4.66 | .05 |
| <u>14 to 15 year olds</u> | | | | | | |
| 1 | 24 | 6 | 15 | 15 | 4.68 | .05 |
| 9 | 20 | 10 | 5 | 25 | 13.38 | .01 |
| 10 | 28 | 2 | 17 | 13 | 8.88 | .05 |
| 11 | 24 | 6 | 15 | 15 | 4.68 | .05 |
| 16 | 9 | 21 | 2 | 28 | 4.01 | .05 |
| 18 | 24 | 6 | 15 | 15 | 4.68 | .05 |
| 25 | 27 | 3 | 16 | 14 | 8.20 | .05 |

TABLE 3

FREQUENCY OF RESPONSES PRODUCING SIGNIFICANT χ^2 VALUES FOR HIGH AND LOW IQ GROUPS(20 HIGH AND 20 LOW AT EACH AGE LEVEL)

| Item | High IQ Group | | Low IQ Group | | χ^2 | $p <$ |
|---------------------------|---------------|---------------------------|--------------|---------------------------|----------|-------|
| | Believe | Not Believe/ Uncertain | Believe | Not Believe/ Uncertain | | |
| <u>11 to 12 year olds</u> | | | | | | |
| 1 | 3 | 7 | 9 | 1 | 5.21 | .05 |
| 7 | 1 | 9 | 8 | 2 | 7.27 | .01 |
| 13 | 1 | 9 | 7 | 3 | 5.21 | .05 |
| <u>14 to 15 year olds</u> | | | | | | |
| 5 | 2 | 8 | 9 | 1 | 7.27 | .01 |
| 20 | 8 | 2 | 1 | 9 | 7.27 | .01 |
| 22 | 9 | 1 | 3 | 7 | 5.21 | .05 |

The influence of sex, as indicated in Table 2, seems to be that girls generally apart from one item relating to sin (Item 22), have firmer religious beliefs than boys, though differences are not highly significant. Girls hold stronger beliefs, particularly concerning the efficacy of prayer, the existence of God and the hereafter and the literal truth of the Bible. These findings support those of Argyle (1) and Glassey (4) rather than those of Goldman (5) who thought that sex was not a significant factor in religious concepts.

Trends in relation to the influence of intelligence, as shown in Table 3, show a diversity of reactions to specific items in the questionnaire. There is a slight trend for the more intelligent in both age groups to be more independent in thought as Goldman (5) had found. The items which produce significant differences are not the same for each age group. In the younger group, the more intelligent reveal a greater degree of disbelief or uncertainty than the less intelligent in the existence of God, and in the necessity for church attendance and baptism in order to be a Christian. In the older group, the more intelligent tend to disbelieve or to be more uncertain than the less intelligent concerning the need for children to belong to the same church as their parents, the existence of a hereafter and the reality of sin.

In conclusion, the findings of this study indicate that increasing doubts concerning religious beliefs are generally age related, older students showing more doubt than younger ones. Secondly, girls tend to have firmer beliefs than boys, though this is slightly age related, older girls remaining firmer in their beliefs than older boys. Finally, higher levels of intelligence tend to be associated with a growth in critical attitude towards religious belief.

APPENDIX

RELIGIOUS BELIEFS QUESTIONNAIRE

- 1 I know there is a God
- 2 God is a strange power working for good, rather than a person
- 3 God is someone who watches you to see you behave yourself and who punishes you if you are not good
- 4 Church goers are better people than non-church-goers
- 5 Young people should belong to the same church as their parents
- 6 The main reason to go to church is to worship God
- 7 One need not go to church to be a Christian
- 8 Good people pray regularly
- 9 Prayers are answered
- 10 Prayers help in time of trouble
- 11 Prayers help to make up for something you have done wrong
- 12 There is a Heaven and only good people go there
- 13 People who have not been baptized will never go to Heaven
- 14 Every word in the Bible is true
- 15 The Bible is a special book
- 16 It is sinful to doubt the Bible
- 17 Hell is a place where you are punished for your sins on earth
- 18 Only our soul lives after death
- 19 God could have created a world in which there was no pain or suffering
- 20 Our life on earth is only a preparation for a fuller life after death
- 21 We can do as we like so long as we go to confession regularly
- 22 A person can sin without being aware that he/she has done so
- 23 It is wrong to have a lot of worldly goods and enjoy yourself
- 24 Catholics, Jews and Protestants are equally good
- 25 Christians should work for unity with each other

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