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Author(s): Francis, L. J., & Hermans, C.A.M.

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Psychological health and attitude toward Christianity: a study among pupils  
attending Catholic schools in the Netherlands

Leslie J. Francis\*

The University of Warwick, UK

Christopher A. M. Hermans

Radboud Universiteit Nijmegen, The Netherlands

\*Corresponding author. Tel: +44 (0)24 7652 2539  
E-mail address: leslie.francis@warwick

Abstract

This study examines the wider relevance of recent research conducted in England, Northern Ireland and Hong Kong concerning the association between religion and psychological health among young people, by administering translations of the same measures to a sample of 980 pupils attending Catholic secondary schools in the Netherlands. These pupils completed the short-form Revised Eysenck Personality Questionnaire together with the Francis Scale of Attitude toward Christianity. The data confirmed the key finding from previous research that a more positive attitude toward Christianity is associated with lower scores recorded on the psychoticism scale. The implications of these findings are discussed for religious educators.

Psychological health and attitude toward Christianity: a study among pupils  
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The broader research literature on the relationship between religion and psychological health provides a complex picture (Koenig, McCullough, & Larson, 2001) since findings tend to vary according to the populations studied and according to the definitions of religiosity and psychological health employed. A series of three earlier studies concerned with the relationship between religion and psychological health, conducted in Hong Kong (Francis, Lewis, & Ng, 2003), England (Francis & Burton, 2007), and Northern Ireland (Francis, Robbins, ap Siôn, Lewis, & Barnes, 2007), proposed an interesting solution to the problem of operationalizing the assessment both of psychological health and of individual differences in attachment to the Christian tradition.

These three studies proposed adopting Eysenck's dimensional model of personality (Eysenck & Eysenck, 1985) as providing an economical and elegant indicator of psychological health. This dimensional model of personality, as operationalized through the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck, & Barrett, 1985), and the Eysenck Personality Scales (Eysenck & Eysenck, 1991), maintains that abnormal personality (poor functional psychological health) is not discrete from, but continuous with normal personality (good functional psychological health). Accordingly, neurotic disorders lie at one extreme of a dimension of normal personality, ranging from emotional stability, through emotional lability, to neurotic disorder. Similarly, psychotic disorders lie at one extreme of another dimension of normal personality, ranging from tendermindedness, through toughmindedness, to psychotic disorder. Eysenck's model also maintains that the two dimensions of neuroticism and psychoticism are orthogonal and independent of each other. Alongside the measures of

neuroticism and psychoticism, Eysenck's model adds a third dimension of personality which is not itself concerned with psychological disorder. This third dimension ranges from introversion, through ambiversion, to extraversion. Eysenck's questionnaires, designed to measure these three dimensions of personality, also routinely include a lie scale.

For the purposes of the present study, the key interest in Eysenck's dimensional model of personality concerns the neuroticism scale (assessing the characteristics of normal personality functioning as precursors of neurotic disorder) and the psychoticism scale (assessing the characteristics of normal personality functioning as precursors to psychotic disorder). Eysenck and Eysenck (1975) defined high scorers on the neuroticism scale as being anxious, worrying, moody, and frequently depressed individuals who are likely to sleep badly and to suffer from various psychosomatic disorders. They are seen as overly emotional, reacting too strongly to all sorts of stimuli, and finding it difficult to get back on an even keel after emotionally arousing experiences. Strong reactions interfere with their proper adjustment, making them react in irrational, sometimes rigid ways. Highly neurotic individuals are worriers whose main characteristic is a constant preoccupation with things that might go wrong, and a strong anxiety reaction to these thoughts. Eysenck and Eysenck (1976) define high scorers on the psychoticism scale as being cold, impersonal, hostile, lacking in sympathy, unfriendly, untrustful, odd, unemotional, unhelpful, lacking in insight, and strange, with paranoid ideas that people are against them. Eysenck and Eysenck (1976) also use the following descriptors: egocentric, self-centered, impersonal, lacking in empathy, solitary, troublesome, cruel, glacial, inhumane, insensitive, sensation-seeking, aggressive, foolhardy, making fools of others and liking odd and unusual things. Eysenck and Eysenck (1975) maintained that emotions such as empathy and guilt are characteristically absent in people who score high on measures of psychoticism.

The three studies reported by Francis, Lewis, and Ng (2003), Francis and Burton

(2007), and Francis, Robbins, ap Siôn, Lewis, and Barnes (2007), proposed adopting the Francis Scale of Attitude toward Christianity (Francis, 1989; Francis, Lewis, Philipchalk, Brown, & Lester, 1995) as providing an economical and elegant indicator of attachment to the Christian tradition. According to Francis's theory underpinning the development of this measure (Kay & Francis, 1996), the attitudinal dimension of religion (concerned with religious affect) gets closer to the heart of the individual's religion than either the cognitive dimension (concerned with religious beliefs) or the behavioral dimension (concerned with religious practices). The affective dimension is less likely than the behavioral dimension (for example, church attendance) to be subject to social constraints. Some young people may attend church as a consequence of parental pressure, while other young people may refrain from attending church as a consequence of peer pressure. The affective dimension is less likely than the cognitive dimension (for example, beliefs about the virgin birth of Jesus or beliefs about the immaculate conception of Mary) to be conditioned by social learning and by denominational teaching. The assessment of the deep-seated affective or attitudinal dimension provides a relatively more stable assessment of Christian commitment which transcends denominational differences.

The Francis Scale of Attitude toward Christianity, originally published by Francis (1978), contains both negative and positive items concerned with an affective response to five components of the Christian faith accessible to and recognised by both children and adults, namely God, Jesus, bible, prayer and church. Each item is assessed on a five-point scale (agree strongly, agree, not certain, disagree, disagree strongly), producing a range of scores from 24 to 120. The reliability and validity of the scale have been supported by studies among school pupils in England (Francis, 1987, 1989), Kenya (Fulljames & Francis, 1987), Nigeria (Francis & McCarron, 1989), Northern Ireland (Francis & Greer, 1990; Greer & Francis, 1991), Scotland (Gibson, 1989; Gibson & Francis, 1989) and South Africa (Francis,

Kerr, & Lewis, 2005). Another series of studies have supported the reliability and validity of the scale among adults in Australia and Canada (Francis, Lewis, Philipchalk, Brown, & Lester, 1995), England (Francis & Stubbs, 1987), the Republic of Ireland (Malbty, 1994), Northern Ireland (Lewis & Malbty, 1997) and the USA (Lewis & Maltby, 1995a).

The Francis scale of Attitude toward Christianity has also been translated into other languages, recognising that integration of cross-cultural quantitative studies in the psychology of religion has been hampered by the lack of common instrumentation. Examples are provided by editions in Arabic (Munayer, 2000), Chinese (Francis, Lewis and Ng, 2002), Dutch (Francis & Hermans, 2000; Lewis & Hermans, 2003), French (Lewis & Francis, 2003, 2004), German (Francis & Kwiran, 1999a; Francis, Ziebertz, & Lewis, 2002), Greek (Youtika, Joseph, & Diduca, 1999), Norwegian (Francis & Enger, 2002; Lewis, Francis, & Enger, 2003), Portugese (Ferreira & Neto, 2002), Swedish (Eek, 2001), and Welsh (Evans & Francis, 1996; Lewis & Francis, 2002; Francis & Thomas, 2003).

The first of the three studies in the series concerned with the association between attitude toward Christianity and psychological health reported on the administration of the Francis Scale of Attitude toward Christianity alongside the short-form Revised Eysenck Personality Questionnaire among a sample of 598 Chinese-speaking, secondary-school pupils in Hong Kong (Francis, Lewis, & Ng, 2003). These data demonstrated that a positive attitude toward Christianity was associated with neither higher nor lower neuroticism scores, but was associated with lower psychoticism scores. Thus, there was no evidence to associate a positive attitude toward Christianity with poorer levels of psychological health among adolescents in Hong Kong, and some evidence to associate a positive attitude toward Christianity with better levels of psychological health (in terms of lower psychoticism scores).

The second study in the series reported on the administration of the Francis Scale of Attitude toward Christianity alongside the short-form Revised Junior Eysenck Personality

Questionnaire among a sample of 5,808 secondary school pupils in England (Francis & Burton, 2007). These data demonstrated that a positive attitude toward Christianity was associated with higher neuroticism scores and with lower psychoticism scores. Thus, there was some evidence to associate a positive attitude toward Christianity with poorer levels of psychological health among adolescents in England (in terms of higher neuroticism scores) and some evidence to associate a positive attitude toward Christianity with better levels of psychological health (in terms of lower psychoticism scores).

The third study in the series reported on the administration of the Francis Scale of Attitude toward Christianity alongside the abbreviated Revised Eysenck Personality Questionnaire among two samples of secondary school pupils in Northern Ireland: 1,093 attending Protestant schools and 1,266 attending Catholic schools (Francis, Robbins, ap Siôn, Lewis, & Barnes, 2007). These data demonstrated that among both religious communities a positive attitude toward Christianity was associated with neither higher nor lower neuroticism scores, but was associated with lower psychoticism scores. Thus, there was no evidence to associate a positive attitude toward Christianity with poorer levels of psychological health among adolescents in Northern Ireland, and some evidence to associate a positive attitude toward Christianity with better levels of psychological health (in terms of lower psychoticism scores).

All three studies were agreed, therefore, on finding an inverse correlation between scores recorded on the index of attitude toward Christianity and the psychoticism scale. This basic finding is consistent with the consensus from a wider body of international research exploring the relationship between attitude toward Christianity and the Eysenckian dimensional model of personality, including studies in Australia and Canada (Francis, Lewis, Brown, Philipchalk, & Lester, 1995), France (Lewis & Francis, 2000), Germany (Francis & Kwiran, 1999b; Francis, Ziebertz, & Lewis, 2003), Greece (Youtika, Joseph, & Diduca,

1999), Hong Kong (Francis, Lewis, & Ng, 2003), Northern Ireland (Lewis & Joseph, 1994), Norway (Francis & Enger, 2005), Republic of Ireland (Maltby, 1997), South Africa (Francis & Kerr, 2003), United States of America (Lewis & Maltby, 1995b), and the United Kingdom (Francis, 1991, 1992, 1993, 1999; Bourke, Francis, & Robbins, 2005). The positive correlation between scores recorded on the index of attitude toward Christianity and the neuroticism scale reported by Francis and Burton (2007) is not generally supported by the wider body of international research cited above.

The aim of the present study, therefore, is to extend this body of research within a different linguistic and cultural context by administering the Dutch translation of the Francis Scale of Attitude toward Christianity and the Dutch translation of the short-form Revised Eysenck Personality Questionnaire to a sample of young people educated within the Catholic school system in the Netherlands. This is an interesting and important context in which to extend the research tradition for two reasons. First, the Netherlands is often described as a highly secularised society in which the social significance of religion has been largely marginalised. Second, both the Protestant and the Catholic Churches have retained a significant involvement in the provision of schools within the state-maintained sector.

## Method

### *Sample*

The survey was completed by a sample of 980 secondary school pupils attending a variety of Catholic state maintained schools in the Netherlands, with a mean age of 13.7 (sd = 15.5) years. Of the total respondents 47% were male and 53% were female; 39% had no religious affiliation, 54% were Catholic and 7% were Protestant. The small proportion of Islamic pupils completing the survey were excluded from the sample in view of the inappropriate content of the questionnaire. Between one-third and two-fifths (36%) of the

sample attended church weekly, 30% attended monthly, 22% attended at least once a year and 12% never attended church.

### *Measures*

Attitude toward Christianity was assessed by the Dutch translation of the Francis Scale of Attitude toward Christianity (Francis & Hermans, 2000) is a 24-item Likert type scale concerned with assessing affective response to five aspects of the Christian tradition, namely God, Jesus, bible, prayer and church. Each item is assessed on a five point scale: *agree strongly, agree, not certain, disagree* and *disagree strongly*.

Psychological health was assessed by a Dutch translation of the short-form Revised Eysenck Personality Questionnaire (Eysenck, Eysenck, & Barrett, 1985) proposes four twelve-item measures of extraversion, neuroticism, psychoticism and the lie scale. Each item is assessed on a dichotomous scale: *yes* and *no*. The items were first translated into Dutch and then back-translated to ensure comparability across the two languages.

### *Data analysis*

The data were analysed by the SPSS statistical package, using the frequency, reliability and correlation routines.

## Results

Table one presents the reliabilities of the four personality scales and the scale of

- insert table 1 about here -

attitude toward Christianity in terms of the alpha coefficients (Cronbach, 1951), together with the mean scale scores for males and females separately. These data demonstrate that all five scales function in a satisfactory manner among the present sample.

Table two presents the Pearson correlation coefficients between extraversion,

- insert tables 2 and 3 about here -

neuroticism, psychoticism, the lie scale and attitude toward Christianity. Given the size of the sample the probability level has been set at one percent. In view of the significant relationships between both personality and sex and attitude toward Christianity and sex, table three presents the partial correlation coefficients controlling for sex. These data demonstrate that there is a significant negative correlation between attitude toward Christianity and psychoticism scores, while attitude toward Christianity is independent of both extraversion scores and neuroticism scores. There is also a significant positive correlation between attitude toward Christianity and lie scale scores.

#### Discussion and conclusion

This study has contributed to a growing body of research concerned with examining the association between religion and psychological health when religiosity is accessed through the Francis Scale of Attitude toward Christianity and psychological health is accessed through the two Eysenckian personality dimensions of psychoticism and neuroticism. The clear consensus to emerge from all of these studies concerns the consistent finding that a more positive attitude toward Christianity is associated with lower psychoticism scores. According to the theoretical framework within which the present study has been established lower psychoticism scores have been interpreted as indicative of a better quality of psychological health.

Moreover, within the series of studies only one has found a significant association with neuroticism scores. In this study of 5,808 young people in England, Francis and Burton (2007) found that a more positive attitude toward Christianity was associated with higher neuroticism scores. According to the theoretical framework within which the present study

has been established higher neuroticism scores have been interpreted as indicative of a poorer quality of psychological health. This finding has not been reproduced elsewhere and requires further investigation.

The only significant association between the Eysenckian dimensional model of personality and attitude toward Christianity in the Netherlands (namely with the psychoticism scale) implies that this dimension of religiosity is associated with better mental health, a finding consistent with studies conducted elsewhere including including studies in Australia and Canada (Francis, Lewis, Brown, Philipchalk, & Lester, 1995), France (Lewis & Francis, 2000), Germany (Francis & Kwiran, 1999b; Francis, Ziebertz, & Lewis, 2003), Greece (Youtika, Joseph, & Diduca, 1999), Hong Kong (Francis, Lewis, & Ng, 2003), Northern Ireland (Lewis & Joseph, 1994), Norway (Francis & Enger, 2005), Republic of Ireland (Maltby, 1997), South Africa (Francis & Kerr, 2003), United States of America (Lewis & Maltby, 1995b), and the United Kingdom (Francis, 1991, 1993, 1999; Bourke, Francis, & Robbins, 2005).

However, being purely cross-sectional correlational studies, the data currently available are not able to adjudicate on the direction of causality in the relationship reported. Eysenck's psychologically-driven theory would argue for the priority of personality in shaping these relationships, seeing individual differences in personality to be biologically based. According to this account individuals who record low scores on the psychoticism scale would be more drawn to the Christian tradition. Such a view is consistent with Eysenck's notion regarding the relationship between low psychoticism and greater conditioning into tenderminded social attitudes and the general location of religiosity within the domain of tenderminded social attitudes (Eysenck, 1975, 1976). On the other hand, such a psychologically-driven theory may be hard-pressed to explain the lack of relationship between neuroticism scores and religion, since the psychological mechanism posited here suggests that

religion provides an attractive escape for neurotic anxieties.

An alternative theologically-driven theory would argue for the priority of religious experience in shaping the relationship between personality, mental health and religion, seeing religion as essentially transformative of individual differences. According to this account individuals who record high scores on the scale of attitude toward Christianity would be challenged by their faith to transform and reject those qualities listed by Eysenck as characterising the high scorer on the psychoticism scale: egocentric, self-centred, impersonal, lacking in empathy, solitary, troublesome, cruel, glacial, inhumane, insensitive, sensation-seeking, aggressive and foolhardy (Eysenck & Eysenck, 1976). On the other hand, such theologically-driven theory may be more hard-pressed to account for the lack of association between attitude toward Christianity and neuroticism. Consistently throughout the Gospel tradition the Christian faith proclaims the twin messages of 'Fear not', and 'Peace be with you', from the angelic annunciation preceding the Lucan birth narrative to the Johannine post-resurrection appearances. According to such theory the Christian disciple should be less troubled by those qualities listed by Eysenck as characterising the high scorer on the neuroticism scale: anxious, worrying, moody, frequently depressed, poor sleepers, suffering from various psychosomatic disorders, and overly emotional (Eysenck & Eysenck, 1975).

The real challenge for future research now is to extend this tradition of research concerning the association between the attitudinal dimension of religion and the Eysenckian conceptualisation of psychological health within other faith traditions. Such extension could be made possible by application of the Sahin-Francis Scale of Attitude toward Islam (Sahin & Francis, 2002), the Katz-Francis Scale of Attitude toward Judaism (Francis & Katz, 2007) and the Santosh Francis Scale of Attitude toward Hinduism (Francis, Santosh, Robbins, & Vij, 2008).

The study also carries implications for ways in which religious education is conceived within the Catholic school system in the Netherlands. In this context Catholic schools are part of the wider state-maintained system and attract pupils from secularised as well as from Catholic homes, as evidenced by the facts that 39% of the pupils in the current sample claimed no religious affiliation and that 12% never attended church. If Eysenck's psychologically-driven theory accounting for the association between psychological health and religiosity is accepted, the religious educator needs to be aware of the extent to which pupil attitudes toward the Christian tradition are shaped by internal psychological factors. According to this account, the religious educator may need to work harder to develop a positive attitude toward the Christian tradition among pupils who record higher psychoticism scores. If the alternative theologically driven theory accounting for the association between psychological health and religiosity is accepted, the religious educator may be seen to be fulfilling a key function not only for the benefit of the faith community but also for the psychological wellbeing of individuals and consequently for the social wellbeing of society as a whole.

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Table 1

Reliability coefficients and mean scale scores by sex

scales	alpha	male		female		t	p<
		mean	sd	mean	sd		
extraversion	0.82	7.9	3.0	8.2	3.3	1.7	NS
neuroticism	0.75	4.7	2.9	5.4	2.9	3.8	.001
psychoticism	0.70	4.1	2.5	3.6	2.7	2.9	.01
lie scale	0.71	4.5	2.8	5.0	2.6	2.8	.01
attitude toward Christianity	0.96	61.2	20.6	66.2	20.3	3.7	.001

Table 2

Correlations between personality and attitude toward Christianity

	E	N	P	L
attitude toward Christianity	+0.00	+0.08	-0.19***	+0.12***
lie scale	-0.28***	+0.03	+0.08	
psychoticism	-0.34***	+0.12***		
neuroticism	-0.28***			

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

Table 3

Partial correlations controlling for sex

	E	N	P	L
attitude toward Christianity	-0.01	+0.06	-0.18***	+0.11***
lie scale	-0.30***	+0.03	0.11**	
psychoticism	-0.35***	+0.14***		
neuroticism	-0.30***			

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