

**Bangor University**

## **DOCTOR OF PHILOSOPHY**

### **The personality profile of Anglican clergy 1992-1996**

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**THE PERSONALITY PROFILE  
OF  
ANGLICAN CLERGY  
1992-1996**

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# PREFACE

At the heart of this dissertation there is a new empirical study into the personality profile of clergy ordained into the Anglican Church in Britain and Ireland between 1992 and 1996. Such a study would not have been possible without the cooperation and care of many clergy who gave of their time to complete the questionnaire and return it to me. I express my sincere gratitude to them.

I wish also to express my gratitude to the Reverend Professor Leslie J Francis who supervised and guided the research and to the sponsors who funded the project.

The findings of this study make available a very thorough personality profile of the clergy ordained over a five year period. It is my hope that this information will be of benefit to the church and to those who serve the Anglican Church in Britain and Ireland.

I declare that this dissertation is not, in whole or part, substantially the same as any that I have submitted for a degree or other qualification at any other university and is the result of my own research.

Susan H Jones

University of Wales,  
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# TABLE OF CONTENTS

Preface	iv
Summary	v
Introduction	1

## **Part one: Eysenck's Model of Personality**

1.	Historical Overview	8
2.	Neuroticism	12
3.	Extraversion	63
4.	Psychoticism	117
5.	Clergy in three dimensions	153
6.	The Eysenck Personality Profiler	167

## **Part two: Personality and the clergy**

7.	The EPP clergy survey	193
8.	Seven aspects of neuroticism	199
9.	Seven aspects of extraversion	307
10.	Seven aspects of psychoticism	380
Conclusions and Recommendations		448
References		475

# Summary

The aim of this dissertation is to provide a more comprehensive personality profile of the clergy using the Eysenck Personality Profiler in order to establish whether or not there is a distinctive clergy personality. A questionnaire was sent to all clergy ordained into the Anglican Church in Britain and Ireland between 1992 and 1996. The questionnaire received a response rate between 62% and 72% over the five years.

The first part of the dissertation discusses the development of Hans J Eysenck's model of personality. Chapter one reviews the history of the development of the personality scales developed by Hans J Eysenck and his associates. Chapter two, chapter three and chapter four describe the development of these questionnaires through the higher order factors of neuroticism, extraversion and psychoticism. Chapter five describes previous research amongst the clergy using the various personality scales developed by Eysenck and his associates. Chapter six investigates the development of the Eysenck Personality Profiler and previous research undertaken using this scale.

The second part of the dissertation describes the new survey. Chapter seven describes the clergy survey, chapter eight, chapter nine and chapter ten describe the results of the seven aspects making up the higher order dimensions of neuroticism, extraversion and psychoticism. The final part of the dissertation draws together the conclusions and interprets these data for the life and ministry of the church.

# INTRODUCTION

The scientific study of personality has proposed a number of well established and in some cases competing models of personality and associated personality inventories. The scientific study of the personality profile of clergy has employed several of these competing models. The aim of the present study is to probe one of these models in depth and to apply the model to a study of Anglican clergy in Britain and Ireland. The model chosen is the one proposed by the relatively new Eysenck Personality Profiler which builds on and develops the longer established Eysenck Personality Inventory and the Eysenck Personality Questionnaire.

The Eysenck Personality Profiler is different from Eysenck's original scales in that the higher order factors of neuroticism, extraversion and psychoticism are broken down into seven component parts. In breaking down the higher order factors it is hoped that a more comprehensive personality profile can be built of the clergy ordained into the Anglican Church in Britain and Ireland between 1992 and 1996.

Previous research into clergy personality has revealed a group of people who appear different to the normal population. For example, Francis (1991) found that prospective male clergy score lower on Eysenck's extraversion scale when using the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and comparable scores on psychoticism and neuroticism. Another study by Francis and Pearson (1991) discovered that the male clergy score higher mean scores on the neuroticism scale of the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975). The aim of this present study is to establish a more comprehensive personality profile of the clergy using the Eysenck

Personality Profiler in order to establish whether or not there is a distinctive clergy personality. Having established whether or not there is a distinctive clergy personality the findings will be discussed in the light of the ministry and mission of the Church. It is argued that insights into the personality profile of those currently being ordained into the Anglican Church may illuminate both the areas of strength and weakness which they bring to ministry.

The case for constructing the personality profile of Anglican clergy using the Eysenck Personality Profiler is developed in two parts. Part one discusses the development of Hans J Eysenck's model of personality. Part two applies this model to the clergy.

Part one has six chapters. Chapter one provides a brief introduction to the development of Hans J Eysenck's dimensional model of personality from the Maudsley Medical Questionnaire through to the Revised Eysenck Personality Questionnaire. This historical introduction shows how Hans J Eysenck has introduced the key concepts of extraversion, neuroticism and psychoticism to the discussion of normal personality. It also suggests that these concepts have remained fluid throughout the process of development. In order to become clearer about the development of these concepts, chapter two, chapter three, and chapter four trace the evolution of the instruments devised to operationalise neuroticism, extraversion and psychoticism.

Each of these three chapters investigates the respective higher order factor in terms of the development of the scale proposed, the items making the higher order construct, the

definition and understanding given by Eysenck of the construct, the psychometric properties of the scale, examples of previous research undertaken using the scale and a summary of the findings.

Chapter five reviews previous research undertaken using the various Eysenck personality scales amongst ministers of religion. The chapter is sub-divided into three sections. Following the introductory overview, section one investigates previous research undertaken using the Eysenck Personality Inventory, section two investigates previous research undertaken using the Eysenck Personality Questionnaire, section three investigates previous research undertaken using the Revised Eysenck Personality Questionnaire short form.

Chapter six introduces the Eysenck Personality Profiler as a radical departure from the other personality measures proposed by Eysenck. In the Eysenck Personality Profiler the 3 dimensions are subdivided into 7 traits and each trait is measured by a set of 21 items. The chapter is divided into five main sections. The first section gives an overview, the second section introduces the Eysenck Personality Profiler and its development in terms of the three higher order factors of neuroticism, extraversion and psychoticism. Section three investigates the psychometric properties of the Eysenck Personality Profiler, section four investigates the previous research undertaken using the Eysenck Personality Profiler and finally section five gives a summary of the findings of the chapter.

Part two of the study has a further four chapters and applies the Eysenck Personality Profiler to the clergy. Chapter seven describes the Eysenck Personality Profiler clergy survey and is split into eight sections. Section one gives an overview of the chapter. Section two describes the design of the questionnaire. Section three looks at the distribution and response to the survey over the five year period. Section four describes the respondents and builds a picture of the clergy in terms of age and marital status. Section five describes the educational standard of the clergy in the sample. Section six describes the clergy in terms of style of churchmanship. Section seven describes the clergy's first curacy and finally section eight summarises the findings.

Chapter eight, chapter nine and chapter ten describe the results of the seven aspects making up the higher order dimensions of neuroticism, extraversion and psychoticism respectively. The chapters are divided into nine main parts. The first part gives an overview to the chapter. The following seven parts look at each of the component parts that make up the higher order dimensions of neuroticism, extraversion and psychoticism. Each of the component part sections are further divided into eight sections. The first section describes the component part, in terms of the definition given by Eysenck and Wilson (1976), the second section in terms of scripture, the third section in terms of psychological theory, the fourth section looks at previous empirical evidence, the fifth section tries to make a hypothesis, the sixth section discusses the scale properties, the seventh section interprets the findings and the eighth section makes a conclusion. The final section of the chapter gives a summary of the chapter.

The final part of the dissertation draws together the empirical data and interprets these data for the life and ministry of the Church. The conclusions and recommendations are given under five main sections. The first section is an overview, the second section looks at the conclusions and recommendations for the component parts that make up the higher order factor of neuroticism. The third section looks at the conclusions and recommendations for the component parts that make up the higher order factor of extraversion. The fourth section looks at the conclusions and recommendations for the component parts that make up the higher order factor of psychoticism. The final sections give a conclusion to the study.

# **PART ONE**

## **Eysenck's Model of Personality**

- 1. Historical Overview**
- 2. Neuroticism**
- 3. Extraversion**
- 4. Psychoticism**
- 5. Clergy in Three Dimensions**
- 6. The Eysenck Personality Profiler**

# 1 Historical Overview

## Overview

This chapter will explore the historical background to Eysenck's theory of personality. It will give an overview of the development of his personality theory as it progressed over a sixty year period.

### *Eysenck's Theory*

Eysenck's dimensional model of personality has been developed over a sixty-year period, beginning in the 1940s. His work on personality stemmed from an interest in a number of studies related to work among people with mental disorders.

In his early work Eysenck investigated the findings of a number of researchers who used factor analysis in their quest to understand what were then described as a range of psychiatric disorders. From these studies and from the theories of Jung (1923) and McDougall (1926) Eysenck derived several hypotheses. The first hypothesis was that people differ with respect to their position on a factor of emotional instability or neuroticism and his second hypothesis was that people differ with respect to their position on a factor of extraversion-introversion. Eysenck also attempted to verify a third

hypotheses, namely that the distribution of people on these two factors was continuous and similar to a normal curve.

The first two hypotheses were tested through a factorial study (Eysenck, 1947) among 700 'neurotic service personnel.' Ratings were obtained on 39 items, including a test of intelligence, and the intercorrelations between these items were submitted to factor analysis. The results support Eysenck's hypotheses. The first factor, characterised by items such as badly organised personality, abnormal before illness, little energy, narrow interests, abnormality in parents etc, is clearly one of emotional instability, or neuroticism.

The second factor contrasts two groups of symptoms and personality traits and opposes the introvert to the extravert group of traits. This result confirmed Eysenck's theory of an introversion-extraversion factor.

Eysenck's third hypothesis was tested by plotting distributions for 1,000 male and 1,000 female neurotics by a weighted combination of ratings for the various traits, which go to make up these two factors. Distributions for both factors are very similar to the normal curve distribution (Eysenck, 1947), so confirming his third hypothesis.

Following this initial discovery, Eysenck constructed inventories specially to investigate the personality postulates of neuroticism, extraversion-introversion and psychoticism. Eysenck's dimensional model of personality was, therefore, operationalised and developed through a series of self-completion questionnaires. His first questionnaire was

published in 1952 and was called the Maudsley Medical Questionnaire (MMQ, Eysenck, 1952a). This questionnaire was a 40 item measure of neuroticism or emotionality. The Maudsley Personality Inventory (MPI, Eysenck, 1959) followed the MMQ and measured neuroticism and extraversion-introversion. The questionnaire consisted of 48 items, 24 measuring neuroticism and 24 measuring extraversion-introversion. The MPI was followed by the Eysenck Personality Inventory (EPI, Eysenck & Eysenck, 1964) in 1964 which consisted of two forms, Form A and Form B and totalled 108 items measuring the extraversion and neuroticism aspects of personality. This inventory added a lie scale to measure dissimulation (Eysenck & Eysenck, 1964). The Eysenck Personality Questionnaire (EPQ, Eysenck & Eysenck, 1975) followed the Eysenck Personality Inventory and consisted of 23 neuroticism items, 21 extraversion items and it also added a new variable to neuroticism and extraversion called psychoticism which consisted of 25 items. A revision of the Eysenck Personality Questionnaire was published in 1985 and is known as the Revised Eysenck Personality Questionnaire (EPQR, Eysenck, Eysenck & Barrett, 1985) and consists of 100 items. This Revised Eysenck Personality Questionnaire was republished as part of the Eysenck Personality Scales, (Eysenck & Eysenck, 1991). An abbreviated form of the Revised Eysenck Personality Questionnaire was published in 1992, by Francis, Brown and Philipchalk. The scale consists of 18 items, 6 extraversion items, 6 neuroticism items and 6 psychoticism items.

Eysenck's emphasis concentrated on the higher order dimensions of personality. Eysenck understood personality in terms of a hierarchical system organised on four main levels. At the lowest are specific responses to specific stimuli, with no assumption of generality.

At the next level there are habitual responses, that is, recurrence of the same or a similar situation produces the same or a similar specific response. Statistically, this level may be identified by test-retest reliability coefficients. At the third level are traits such as suggestibility, persistence, rigidity, and accuracy, determined and identified by the intercorrelations of a number of habitual responses. At the highest level are intercorrelations of a number of traits; thus, according to some models a higher order factor of 'introversion' arises from the intercorrelation of, for example, persistence, rigidity, subjectivity, shyness, irritability. While the higher order factor of 'neuroticism' arises from the intercorrelation of suggestibility, autonomic instability, poor motor co-ordination, and other similar traits.

Whilst Eysenck developed these scales of personality in terms of a hierarchical model, he was also developing a parallel test which would measure personality in terms of the lower order traits. This scale was published initially in *Know Your Own Personality* (Eysenck & Wilson, 1976). This scale consisted of a set of 21 trait inventories, 7 each for extraversion, neuroticism and psychoticism. This scale was later developed by Eysenck, Barrett, Wilson and Jackson (1992) and has become known as the Eysenck Personality Profiler.

This dissertation sets out to examine these instruments and will profile the 3 higher order factors, of neuroticism, extraversion and psychoticism in chapters 2, 3, and 4 and will examine the Eysenck Personality Profiler in chapter 5.

## 2 Neuroticism

### Overview

This chapter will explore Eysenck's theory of neuroticism as it has developed through the various personality questionnaires he has constructed, beginning with the Maudsley Medical Questionnaire (Eysenck, 1952a) and ending with the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991). The aim of this chapter is to investigate the construct known as neuroticism and to assess whether the understanding and measurement of this higher order dimension remains the same as it develops through the different scales proposed by Eysenck and his associates.

The chapter will be sub-divided chronologically by the name of the questionnaire and each of the sub-divisions will look at the development of the instrument, the items that make up the construct known as neuroticism, the definition and understanding given by Eysenck of the construct known as neuroticism, the psychometric properties of the neuroticism scale, examples of research undertaken using the neuroticism scale and a summary of the findings.

### Maudsley Medical Questionnaire

#### *Developing the neuroticism scale of the MMQ*

The first inventory Eysenck constructed to measure neuroticism (N) was the Maudsley Medical Questionnaire, (MMQ, Eysenck, 1952a). The Maudsley Medical Questionnaire consists of 40 items and the respondent is asked to answer all the questions by underlining

the answer Yes or No. There is very little literature about its construction and the choice of questions used. It is known, however, that alongside the neuroticism scale was an 18 item lie scale which was frequently used in conjunction with the Maudsley Medical Questionnaire.

### ***Neuroticism scale items in the MMQ***

In the Maudsley Medical Questionnaire neuroticism was assessed by the following 40 items:

- Do you have dizzy turns?
- Do you get palpitations or thumping in your heart?
- Did you ever have a nervous breakdown?
- Have you ever been off work through sickness a good deal?
- Did you often use to get 'stage fright' in your life?
- Do you find it difficult to get into conversation with strangers?
- Have you ever been troubled by a stammer or stutter?
- Have you ever been made unconscious for two hours or more by an accident or blow?
- Do you worry too long over humiliating experiences?
- Do you consider yourself a nervous person?
- Are your feelings easily hurt?
- Do you usually keep in the background on social occasions?
- Are you subject to attacks of shacking or trembling?
- Are you an irritable person?
- Do ideas run through your head so that you cannot sleep?
- Do you worry over possible misfortunes?
- Are you rather shy?

- Do you sometimes feel happy, sometimes depressed, without any apparent reason?
- Do you daydream a lot?
- Do you seem to have less life about you than others?
- Do you sometimes get a pain over your heart?
- Do you have nightmares?
- Do you worry about your health?
- Have you sometimes walked in your sleep?
- Do you sweat a great deal without exercise?
- Do you find it difficult to make friends?
- Does your mind often wander badly, so that you loose track of what you are doing?
- Are you touchy on various subjects?
- Do you often feel disgruntled?
- Do you often feel just miserable?
- Do you often feel self-conscious in the presence of superiors?
- Do you suffer from sleeplessness?
- Did you ever get short of breath without having done heavy work?
- Do you suffer from severe headaches?
- Do you suffer from nerves?
- Are you troubled by aches and pains?
- Do you get nervous in places such as lifts, trains or tunnels?
- Do you suffer from attacks of diarrhoea?
- Do you lack self-confidence?
- Are you troubled with feelings of inferiority?

## ***Defining neuroticism in the MMQ***

According to Eysenck (1947):

neurotic introverts show a tendency to develop anxiety and depression symptoms, and they are characterised by obsessional tendencies, irritability and apathy. They also suffer from a lability of the autonomic system. According to their own statement, their feelings are easily hurt, they are self-conscious, nervous, given to feelings of inferiority, moody, day-dream easily, keep in the background on social occasions, and suffer from sleeplessness. They are generally accurate, but slow. Their level of aspiration is unduly high, but they tend to under-rate their own performance. Eysenck called this factor dysthymia.

In comparison:

neurotic extraverts show a tendency to develop hysterical conversion symptoms, and a hysterical attitude to their symptoms. They show little energy, narrow interests, have a bad work history, and are hyperchondriacal. According to their own statement, they are troubled by a stammer or stutter, are accident prone, frequently off work through illness, disgruntled and troubled by aches and pains. They tend to be quick but inaccurate. Their level of aspiration is low, but they tend to over-rate their own performance. He called this factor hysteria.

## ***Psychometric properties of the MMQ neuroticism scale***

The Eysenck literature remains silent on the psychometric properties of the Maudsley Medical Questionnaire neuroticism scale.

The only criticism stated in Eysenck's literature of the Maudsley Medical Questionnaire was its suitability to the general population as Eysenck found that the scale was more suitable for neurotics than for the normal population.

## ***Applying the MMQ neuroticism Scale***

The Maudsley Medical Questionnaire was never published in its English form, but a German translation was published and has been quite widely used in German speaking countries

(Eysenck & Eysenck, 1969).

Eysenck has, however, quoted in his book, *The Scientific Study of Personality* (Eysenck, 1952a), a study in which 500 subjects were given the Maudsley Medical Questionnaire and interviewed by a psychiatrist. The results of this study showed a positive correlation of .70 between the psychiatrist's diagnoses and the questionnaire results.

One further study using the Maudsley Medical Questionnaire and reported in Eysenck (1952a) is the study undertaken by Eysenck in conjunction with Her Majesty's forces. The Maudsley Medical Questionnaire was administered to 1,000 normal and 1,000 neurotic (discharged) members of Her Majesty's forces. The results show the mean scores of the neurotic group being 20.1 in comparison with 9.98 for the normal group

Petrie (1942) administered the Maudsley Medical Questionnaire to 49 male and 8 female students at a medical school along with two other neuroticism measures, The Word Connection List and The Index of Inaccuracy. These scales were correlated with several cognitive tests that were administered which included tests of vocabulary, classification, rote memory, sentence completion, fluency, decoding, and form perception. The results showed that the correlations of the neuroticism measures with the ratings were all in the expected direction, but low. The correlations between the Maudsley Medical Questionnaire and the Word Connection list were -.16 and -.08.

## **Maudsley Personality Inventory**

### ***Developing the neuroticism scale of the MPI***

The second inventory Eysenck constructed was the Maudsley Personality Inventory (MPI, Eysenck, 1959). In constructing this personality inventory Eysenck developed the neuroticism scale of the Maudsley Medical Questionnaire and added a scale to measure extraversion. The Maudsley Personality Inventory neuroticism scale consists of 24 items and was developed from other questionnaires, namely questionnaires developed by Lovell (1945) and North (1949) from the Guilford questionnaires (for development of this work, see Guilford & Guilford, 1934, 1936, 1939a, 1939b). Eysenck used the factor analysis of these questionnaires because it had been suggested that Guilford's C scale may be a good index of neuroticism. It was decided, however, not to use the scales in their entirety because there were certain weaknesses in the Guilford scales.

The first weakness according to Eysenck was the fact that the scales were long and repetitive. The second weakness was felt to be that little attention had been given to the possible importance of sex differences when the scales were constructed.

The third weakness was a concern that some of the items included in the C scale did not correlate at all with other C items whereas some items from other scales actually had higher correlations with the C scores. Indeed, Eysenck tried to improve the reliability of the C scale as a possible measure of neuroticism by carrying out an item analysis which would enable the poor items to be degraded and to include items from other scales provided that these showed high relationships with the C score.

The fourth weakness concerned the scales as unitary factors. Guilford presented his scale as unitary factors but empirically it appeared that this hypothesis was not in fact always borne out, particularly in the case of the S (social shyness) scale. It appeared that some items on the

S scale were measures of an introverted type of social shyness, whereas others were measures of the neurotic type of social shyness. The total S scale consequently breaks up into two relatively unrelated parts.

Using this information Eysenck constructed a questionnaire containing 261 items in all. From Guilford's main personality factors he included all items from the Guilford scales of S (social shyness), D (depression), C (emotionality, neuroticism), R (rhythymia, freedom from care), G (general activity), A (ascendance) and all the items of the Maudsley Medical Questionnaire (Eysenck, 1952a). This was included in order to obtain evidence on the relationship between neuroticism, as measured by the Maudsley Medical Questionnaire, and Guilford's C scale.

The questionnaire was administered to 200 men and 200 women; all were British-born and over 18 years of age. The majority of the sample was in the 20-35 year age range and most of them were upper middle, lower middle and skilled working class. The participants completed the questionnaire anonymously. Various analyses were carried out on the data. On the basis of the results two questionnaires were prepared in the hope that these might prove to be improved measures of extraversion-introversion and neuroticism as compared with the R and C scales.

After extensive analysis Eysenck produced a 48 item questionnaire known as the Maudsley Personality Inventory (Eysenck, 1959) which consists of 24 extraversion-introversion items and 24 neuroticism items. The responses requested by the questionnaire differ to that of the Maudsley Medical Questionnaire; now the respondents are asked to answer the questions by putting a circle round Yes or No and an option was given for those who could not agree or

disagree with the statement by circling the question mark (?).

The principles governing the selection of questions were as follows: all items in the neuroticism scale should have significant relations with the C scale for both men and women. Items in the extraversion scale, conversely, were chosen in such a way that all had significant relations with the R scale for both men and women, but not with the C scale.

Various other requirements were also borne in mind. Thus, an attempt was made to select only items where chi square values for men and women were not too dissimilar; where differences between the sexes were observed on one item, another item was selected in such a way as to balance the disproportion. In this way it was hoped to obtain scales which could be used for both sexes equally. Another requirement was that items should not be mere duplicates of each other, slightly changed in wording, but should cover different aspects of neuroticism, or of extraversion-introversion.

According to Guilford (1975) included in the inventory are 44 Guilford factors (sic). Twenty make up the neuroticism scale; there are 7 D items, 6 N items, 2 C items, 2 I items, 2 O items, and 1 E item. This contradicts Eysenck and Eysenck (1969), where he says that the Guilford scales used are S, D, C, R, G, and A. Bendig (1962) confirms Eysenck's claim, whilst Jensen (1958) asserts that the Maudsley Personality Inventory is made up of the 'factors of S, T, D, C, R from the Guilford Inventory' and McGuire, Mowbray, and Vallance (1963) claim that Eysenck uses C, R, S, G, A but no D depression scale.

Alongside the Guilford items Eysenck (1959) also included items from the Maudsley Medical Questionnaire (Eysenck, 1952a). Eysenck has used only four items in their entirety

from the Maudsley Medical Questionnaire namely:

- Do you often feel disgruntled?
- Are you touchy on various subjects?
- Do ideas run through your head so that you cannot sleep?
- Do you sometimes feel happy, sometimes depressed, without any apparent reason?

There are, however, four reworded items:

- Does your mind often wonder while you are trying to concentrate? / Does your mind often wonder badly, so that you lose track of what you are doing? (MMQ)
- Are your feelings rather easily hurt? / Are your feelings easily hurt? (MMQ)
- Do you like to indulge in reverie (daydreaming)? / Do you daydream a lot? (MMQ)
- Do you ever feel just miserable for no good reason at all? / Do you often feel just miserable? (MMQ)

The remaining 16 items are new.

### ***Neuroticism scale items in the MPI***

In the Maudsley Personality Inventory neuroticism was assessed by the following 24 items:

- Are your daydreams frequently about things that can never come true?
- Do you often feel disgruntled?
- Are you inclined to ponder over your past?
- Do you often experience periods of loneliness?
- Are you touchy on various subjects?
- Do you often find that you have made up your mind too late?

- Does your mind often wonder while you are trying to concentrate?
- Would you rate yourself as a tense or 'highly-strung' individual?
- After a critical moment is over do you usually think of something you should have done but failed to do?
- Are you frequently 'lost in thought' even when supposed to be taking part in conversation?
- Do ideas run through your head so that you cannot sleep?
- Do you like to indulge in reverie (daydreaming)?
- Have you often felt listless and tired for no good reason?
- Are you sometimes bubbling over with energy and sometimes very sluggish?
- Do you spend much time in thinking over good times you have had in the past?
- Have you ever been bothered by having a useless thought come into your mind repeatedly?
- Are your feelings rather easily hurt?
- Do you have periods of such great restlessness that you cannot sit long in a chair?
- Do you ever feel 'just miserable' for no good reason at all?
- Are you often troubled with feelings of guilt?
- Are you inclined to be moody?
- Do you sometimes feel happy, sometimes depressed, without any apparent reason?
- Do you have frequent ups and downs in mood, either with or without apparent cause?
- Have you often lost sleep over your worries?

### ***Defining neuroticism in the MPI***

Eysenck (1953) in his book *The Structure of Human Personality* defines the neurotic – social

shyness as a person troubled about being self-conscious, experiencing periods of loneliness, troubled with feelings of inferiority and self-consciousness with superiors, worrying over humiliating experiences and about being shy, ill at ease with other people, not well posed in social contacts. In other words, people scoring high on the neuroticism scale are troubled and worried over their social contacts and would like to be more adequate in dealings with other people, but whose emotional reactions seem to interfere with their social adjustment.

Eysenck (1959) explains that neuroticism refers to the general lability of a person, their over responsiveness, and their liability to neurotic breakdown under stress.

### ***Psychometric properties of the MPI neuroticism scale***

Eysenck (1956) quotes a split-half reliability coefficient of .884 for neuroticism and a low correlation of -.09 with extraversion, which demonstrates the independence of the neuroticism scale.

Jensen (1958) using split half reliability found that among normal adult males and females the neuroticism scale was high .90 for normal adult males, .87 for normal adult females, making a split-half reliability of .88 for the two combined.

Eysenck (1959) in *The Manual of the Maudsley Personality Inventory* uses both split half and Kuder-Richardson reliability coefficients to assess the reliability of the Maudsley Personality Inventory. For neuroticism the scores range between .85 and .90 on many different samples. There is, however, no information about the different samples.

There is a correlation between neuroticism and extraversion shown by Eysenck (1959) in 20

different normal samples. Since the actual correlation has been around  $-.15$ , it can be concluded that, although the scales are meant to be independent of one another this is not fully borne out.

Knowles (1960) using the Maudsley Personality Inventory predicted that test-retest correlations for neuroticism in neurotic and normal populations would not differ significantly. Using a sample of 93 surgical patients and 63 psychiatric patients with a clearly neurotic diagnosis, Knowles found on retesting his sample a year after the first testing that the results disprove the predication regarding the neuroticism factor. The retest correlation for the neurotics was  $.70$  which was below that for the normal population  $.84$ .

McGuire, Mowbray and Vallance (1963) tested the reliability of the Maudsley Personality Inventory by using the same split-half reliability as Eysenck (1956) and discovered that his reliability of  $.89$  for neuroticism compared favourably with Eysenck. When the authors investigated the way in which Eysenck had split the scale they discovered that the two halves of each scale were almost identical. For example compare item 10 'Are you inclined to be moody?' with item 11 'Do you have frequent ups and downs in mood, either with or without apparent cause?' or item 14 'Are you inclined to keep in the background on social occasions?' with item 36 'Are you inclined to keep quiet when out in social groups?' Examination of the questionnaire shows similar resemblances between questions 13 and 31, 15 and 33, 17 and 35, 16 and 38, 9 and 22. This is surprising when one of the reasons given by Eysenck for not using Guilford's scales was the nature of their repetitiveness which added nothing to their reliability. In order to check the reliability McGuire, Mowbray and Vallance (1963) undertook a different splitting of items. They split the items by including the same pairs in the same half. This revealed lower reliability coefficients. On the neuroticism scale

the new split-half reliability is .80.

Bolardos (1964) administered the Maudsley Personality Inventory in Portuguese to 60 normal and 51 neurotic subjects of whom 19 were diagnosed as hysterics and 32 as dysthmics. The mean neuroticism score of the neurotic group was 34, with a standard deviation 8.5; that of the normal group was 17.2, with a standard deviation of 8.0. The difference was significant at the  $p < .01$  level, and gives rise to a correlation between Maudsley Personality Inventory and clinical diagnosis of .78. Hysterics and dysthmics had neuroticism scores of 34.5 and 32.8 respectively the difference is not significant.

Jalota (1965) administered a Punjabi version of the Maudsley Personality Inventory to 75 male and 75 female students at the Punjabi University, Chandigarh. The mean neuroticism scores for males and females combined was 23.2, with a standard deviation of 10.0; this corresponds with the English norms of 19.9 and a standard deviation of 11.0. There was no significant difference between the male and female groups and the data suggest that the Indian group was slightly more neurotic than the English standardization group. The reliability of the neuroticism scale was .72. The correlation between extraversion and neuroticism was  $-.22$ .

Hannah, Storm and Caird (1965) administered the Maudsley Personality Inventory and the Fear Survey Schedule to 1,958 male and female undergraduates. Their results show a mean neuroticism score of 23.46 with a standard deviation of 9.87.

Singh (1966) investigated the reliability of a Hindi version of the Maudsley Personality Inventory with a group of 100 male non-criminals. The results show that the split-half

product-moment correlation for neuroticism was .565. Singh used the Spearman-Brown formula as the index of reliability and found a value of .72 for neuroticism. Singh also found that the scales of extraversion and neuroticism were independent of each other.

H. J. Eysenck and S. B. G Eysenck (1969) administered the Maudsley Personality Inventory to a large number of subjects, both normal and neurotic. The original sample of 200 men and women on whom item analysis and factor analysis was carried out was supplemented by groups of students, industrial apprentices, nurses and neurotic groups including prisoners and sufferers from psychotic disorders. They report mean neuroticism scores for specific groups which are presented in table 2.1.

Table 2.1 Mean neuroticism scores from H. J. Eysenck and S. B. G. Eysenck (1969)

Group	N	M	SD
Normals	1,800	19.89	11.02
Schizophrenics	40	26.35	9.15
Affectives	40	19.80	11.23
Manics	20	14.60	9.21
Depressives	20	25.00	10.82
Total Psychotics	80	23.08	10.70
Neurotics	60	31.35	10.11

Jensen (1958) criticised the Maudsley Personality Inventory and has made several comments about the orthogonal nature of the extraversion and neuroticism scale, the higher neuroticism scores in certain samples and Eysenck's theory.

He states that the extraversion and neuroticism scales are not orthogonal, that is unrelated or uncorrelated, in all samples. However, when they are significantly correlated they have at most only about 10 per cent of their variance in common. A significant negative correlation is seen between extraversion and neuroticism only in those samples which in some way represent some highly selected (and therefore biased) element of the general population, and these biased samples are generally higher on neuroticism than the general population. Jensen suggests that the reason behind these findings may well be the problem of social desirability.

Another fault he sees with the scale is in relation to scoring the questionnaire. All the neuroticism items are keyed 'yes', while only two-thirds of the extraversion scale items are keyed 'yes'. If there is a generalized tendency to agree with statements in a questionnaire regardless of their specific content, there would as a consequence be a built-in negative correlation between extraversion and neuroticism.

Jensen (1958) also claims that Eysenck's theory of extraverted neurotics being hysterics (and psychopaths), and introverted neurotics being dysthymics is not borne out.

### ***Applying the MPI neuroticism scale***

The Maudsley Personality Inventory has been used to investigate the differences between normal and neurotic groups of people (Eysenck, 1959) and investigations have been made to assess its validity as a diagnostic tool in psychiatry (McGuire, Mowbray & Vallance 1963).

In an early study Eysenck used the Maudsley Personality Inventory to differentiate between normal and various neurotic groups. Eysenck (1959) in a paper entitled 'The differentiation between normal and various neurotic groups on the Maudsley Personality Inventory' used a

normal standardisation group of 1,800 English 'normals' and 1,500 American 'normals' and compared them with hospital patients diagnosed as dysthymic, hysteric and psychopathic, prisoners who were recidivists in one of Her Majesty's Prisons and a psychosomatic group which consisted of patients suffering from asthma and ulcers.

The results showed that all neurotic, psychosomatic and recidivist groups were more neurotic than in the normal sample, that dysthymics are the most introverted and psychopaths the most extraverted groups, and that hysterics, recidivists and psychosomatic patients cannot be discriminated from each other on the basis of the Maudsley Personality Inventory, although they are differentiated from dysthymics, normals and psychopaths.

McGuire, Mowbray and Vallance (1963) investigated the value of the Maudsley Personality Inventory as a diagnostic tool in psychiatry. The test was administered to unselected groups of inpatients in the psychiatric wards of the Southern General Hospital, Glasgow. On several occasions over a period of six weeks. The results showed that all diagnostic groups were differentiated from normals on the neuroticism scale but there was no distinction between the diagnosis groups.

The Maudsley Personality Inventory has also been used in a number of studies to investigate the relationship for example, between neuroticism and academic achievement (Lynn, 1959; Lynn & Gordon, 1961; Savage 1962); neuroticism and fear (Hannah, Storm & Caird, 1965); neuroticism age and gender (Hannah, Storm & Caird, 1965; Gutman, 1966), neuroticism and vocational interest, (Bendig, 1963), and neuroticism and religious conversion experiences (Roberts, 1965).

Lynn's (1959) sample consisted of 115 male students and 96 female students and the control groups consisted of 67 female occupational therapy students and 100 male apprentices. The results showed that both male and female students were significantly more neurotic than the apprentices and occupational therapy students ( $p < .05$ ).

Lynn and Gordon (1961) investigated the relationship between neuroticism and intelligence and educational attainment. The sample consisted of 60 male university students living in a university hall of residence. They were administered the Maudsley Personality Inventory along with the Mill Hill Vocabulary Test (Raven, 1965) and Raven's Progressive Matrices, (Raven, 1938). The results showed that university students tend to score higher on neuroticism and introversion than the general population. Lynn and Gordon (1961) also found that there was no significant correlation between neuroticism and intelligence when assessed by the matrices test.

Savage (1962) administered the Maudsley Personality Inventory to 168 male and female students who were entering the Arts Faculty of New England University in 1959, 1960 and 1961 in order to assess the relationship between personality and academic performance. The results showed that neuroticism is significantly related to academic performance with a negative correlation of .9 ( $p < .05$ ). It appears from these studies that there is a relationship between neuroticism and academic performance.

Hannah, Storm and Caird (1965) administered the Maudsley Personality Inventory and the Fear Survey Schedule to 1,958 male and female Canadian undergraduates. The results showed that the mean neuroticism, phobic and fear scores are significantly higher for women than the corresponding scores for men. Men were less neurotic ( $p < .001$ ).

Gutman (1966) administered the Maudsley Personality Inventory to 1,419 Canadian subjects. There were 832 males and 587 females between the ages of 17 and 94. The results showed that neuroticism scores tended to decrease between young adulthood and middle age, and increase between middle and old age. At all age levels females showed higher mean neuroticism scores than males but the sex differences were only significant at the 17-25 age level. The mean neuroticism scores for the total sample of females was 21.02 (standard deviation 8.81) which was significantly higher ( $p < .05$ ) than for males who had a mean score of 19.23 (standard deviation of 9.92). From these two studies it would appear that women record higher neuroticism scores.

Bendig (1963) administered the Strong Vocational Interest Blank (SVIB) and the Maudsley Personality Inventory to 234 college freshmen (115 men and 119 women). The results showed that the neuroticism scale was negatively correlated with SVIB in areas III (production manager) and VIII (business) for both men and women and with areas IV (practical) and V (social service) for women.

Roberts (1965) administered the Maudsley Personality Inventory to 43 volunteer students from a conservative evangelical theological college alongside an interview to gain information about the students' personality and religious conversion experiences. The results showed that neuroticism was not significantly related to the type of conversion. Neuroticism scores were, however, significantly greater for those who had a sudden conversion but remained in the same faith as their upbringing than, that of the remainder ( $p < .01$ ).

## **The Maudsley Personality Inventory: short form**

### ***Developing the neuroticism scale of the short form of the MPI***

Eysenck (1958) constructed a short form of the Maudsley Personality Inventory. This short form comprised 12 of the most diagnostic questions, six of which were neuroticism items. These six questions had been selected from a previous item-analytic and factor-analytic study.

In order to test the short form of the Maudsley Personality Inventory the 12 questions were given to 1,600 men and women at the end of an interview in which a number of questions were asked about commercial products. Each question answered 'yes' was scored plus one point for neuroticism; each question answered 'no' was scored minus one point for neuroticism. No points were given for answers which could not be clearly classified as either 'yes' or 'no'. According to Eysenck (1958) the possible range of scores on either factor is from plus six points to minus six points, a total range of 12 points. Correlations were calculated between the 12 items and a factor analysis performed; this disclosed two orthogonal factors clearly identical with those of the previous analysis. The split-half reliability is .79 for neuroticism and the correlation between extraversion and neuroticism is  $-.05$ .

### ***Neuroticism scale items in the short form of the MPI***

The short form of the Maudsley Personality Inventory consists of the following 6 items:

- Do you sometimes feel happy, sometimes depressed, without any apparent reason?
- Do you have frequent ups and downs in mood, either with or without apparent cause?
- Are you inclined to be moody?

- Does your mind often wander while you are trying to concentrate?
- Are you frequently ‘lost in thought’ even when supposed to be taking part in a conversation?
- Are you sometimes bubbling over with energy and sometimes very sluggish?

### ***Defining neuroticism in the short form of the MPI***

Since the short form Maudsley Personality Inventory neuroticism scale is explicitly derived from the parent edition of the Maudsley Personality Inventory no separate definition of neuroticism has been provided in the literature in respect of the short form scale.

### ***Psychometric properties of the short form of the MPI neuroticism scale***

McGuire, Mowbray and Vallance (1963) investigated the value of the Maudsley Personality Inventory as a diagnostic tool in psychiatry. The test was administered to unselected groups of inpatients in the psychiatric wards of the Southern General Hospital, Glasgow, on several occasions over a period of six weeks. Not only did they evaluate the full Maudsley Personality Inventory but they also assessed the short form of the Maudsley Personality Inventory. Eysenck's (1958) high correlations were confirmed.

Shaw and Hare (1965) have used the short form of the Maudsley Personality Inventory in a survey in two districts in Croydon. A total of 1,857 adults were interviewed. In addition the questionnaire was re-administered to a random 1 in 8 of the sample families making a total of 239 adults. The interviewer who asked the questions and recorded the answers administered the Maudsley Personality Inventory. The results show through the product-moment correlation coefficient extraversion and neuroticism are largely independent of each other in normal populations with a correlation of  $-.03$ .

In this study the test-retest reliability showed that the mean neuroticism scores, in the case of men and women are considerably lower on retest. The difference taking the sexes together, is significant at the 0.1 per cent level of confidence. The test-retest correlation coefficient for males is +.73, for females is +.67 and for the sample as a whole is +.70.

Jalota (1965) administered a Punjabi version of the short form of the Maudsley Personality Inventory to 75 male and 75 female students at the Punjabi University, Chandigarh. The results show a mean neuroticism score of 7.1, compared with 6.2 for the English standardisation group.

### ***Applying the short form of the MPI neuroticism scale***

The short form of the Maudsley Personality Inventory has been used by a number of researchers to investigate, for example, personality and the dimensions of job incentives (Rim, 1961), risk (Rim, 1964), age and gender (Shaw & Hare, 1965).

Rim (1961) administered the short form of the Maudsley Personality Inventory (Eysenck, 1958) to 348 students (323 men and 25 women) in order to assess the relationship between personality and the dimensions of job incentives. The results showed no correlation between the scores of the 'need for achievement' or of the 'fear of failure' and neuroticism.

Rim (1964) administered the short form of the Maudsley Personality Inventory to 80 subjects (40 men and 40 women) in order to investigate group decisions which involve risk. The results showed that except for those scoring highest on neuroticism, subjects at all levels

shift, as a consequence of group decision, in the more risky direction in their personal decisions. Subjects scoring high on neuroticism show no such change in the risky direction, low scoring subjects change slightly in this direction, and the average scores showed the largest shift in the risky direction, as a consequence of group discussion. The difference between the average scores and the high scorers is significant at the 1 per cent level, whereas the difference between the average scores and the low neurotic group is not significant.

Shaw and Hare (1965) used the short form of the Maudsley Personality Inventory in a survey in two districts in Croydon. A total of 1,857 adults were interviewed. The results of this study point in the same general direction as Eysenck's study (1958). In both studies women scored higher on the neuroticism scale than men. The younger group also scored higher on the neuroticism scale than the older groups. Social class seems to have little effect.

## **Eysenck Personality Inventory**

### ***Developing the neuroticism scale of the EPI***

The Eysenck Personality Inventory (EPI, Eysenck & Eysenck, 1964) is a development of the Maudsley Personality Inventory, and like the Maudsley Personality Inventory the Eysenck Personality Inventory sets out to measure two major dimensions of personality, extraversion and neuroticism. The Eysenck Personality Inventory is made up of two forms, Form A and Form B which together contain 108 items. When reviewing the development of the Eysenck Personality Inventory and the subsequent research undertaken using the Eysenck Personality Inventory it became apparent that it is the Eysenck Personality Inventory Form A which has been the most widely used of the two forms and so the emphasis in this sub-section will be on the Eysenck Personality Inventory Form A.

According to the *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) the improvements that have been incorporated into the Eysenck Personality Inventory make the Eysenck Personality Inventory more useful from many practical points of view. The claimed advantages include the fact that the Eysenck Personality Inventory consists of two parallel forms, thus making possible retesting after experimental treatment without interference from memory factors. The Eysenck Personality Inventory items have been carefully reworded so as to make them understandable even by subjects of low intelligence and/or education; the Maudsley Personality Inventory items were found to be rather too difficult for subjects of this type. The correlation between extraversion and neuroticism on the Maudsley Personality Inventory was small but according to Eysenck and Eysenck (1964) 'nonetheless marginally significant.' The Eysenck Personality Inventory contains a lie scale, which may be used to eliminate subjects showing 'desirability response set'; no such scale was contained in the published form of the Maudsley Personality Inventory.

The retest reliability of the Eysenck Personality Inventory is somewhat higher than that of the Maudsley Personality Inventory; even after periods of several months it is still in excess of .85. Direct evidence is available of the validity of the Eysenck Personality Inventory as a descriptive instrument of the behaviour manifestations of personality.

Eysenck and Eysenck (1964) in developing the Eysenck Personality Inventory chose questions based on previous factor analysis with the Maudsley Personality Inventory and undertook a further 12 factor analytic studies. This resulted in a matrix of 128<sup>2</sup> entries, which included all items in Form A and Form B, as well as a set of substitute items. The subjects of these investigations included university students, various working and middle-class groups, varying in age and sex.

Administration of the questionnaire was undertaken in two ways. In some studies subjects filled in forms, whilst in others they answered questions put by interviewers (Eysenck, 1960; Eysenck & Eysenck, 1962). The total number of subjects involved was 30,000. The results showed the retest reliabilities to be quite satisfactory, running between .84 and .94 for the complete test and between .80 and .97 for the separate forms. The split half reliabilities for the combined scales run from .85 to .95; for the separate scales they run from .74 to .91.

In answering Carrigan's (1960) criticism, about the correlation between extraversion and neuroticism on the Maudsley Personality Inventory Eysenck found that the observed correlations between extraversion and neuroticism reflect the choice of questions. If more questions are taken from the 'melancholic' quadrant, then extraversion and neuroticism show a negative correlation, whereas a bias in favour of questions from the 'choleric' quadrant result in a positive correlation between extraversion and neuroticism. An attempt was made to correct this imbalance by selecting equal numbers of questions from both quadrants. The results show that the correlation between extraversion and neuroticism is -.06 in the normal group, and -.09 and -.09 in the neurotic and psychotic groups respectively. According to Eysenck and Eysenck (1964) these values are near enough to zero to make the scales for all practical purposes independent.

Eysenck and Eysenck (1964) in their introduction to the *Manual of the Eysenck Personality Inventory* claim that the Eysenck Personality Inventory is 'sufficiently similar to the Maudsley Personality Inventory, and correlates sufficiently highly with it, to make it almost certain that the experimental findings reported for the older instrument will also apply to the newer scale,' the new scale Form A however, only has 3 complete questions from the

Maudsley Personality Inventory neuroticism scale and 5 reworded questions.

The following questions have been taken completely from the Maudsley Personality Inventory:

- Are your feelings rather easily hurt?
- Are you sometimes bubbling over with energy and sometimes very sluggish?
- Do ideas run through your head so that you cannot sleep?

The following questions have been taken from the Maudsley Personality Inventory and reworded:

- Does your mood often go up and down? / Do you have frequent ups and downs in mood, either with or without apparent cause? (MMQ)
- Do you ever feel 'just miserable' for no good reason? / Do you ever feel 'just miserable' for no good reason at all? (MMQ)
- Do you like daydreaming a lot? / Do you like to indulge in reverie (daydreaming)? (MMQ)
- Are you often troubled about feelings of guilt? / Are you often troubled with feelings of guilt? (MMQ)
- Would you call yourself tense or highly strung? / Would you rate yourself as a tense or 'highly-strung' individual? (MMQ)

### ***Neuroticism scale items in the EPI***

In the Eysenck Personality Inventory Form A neuroticism was assessed by the following 24 items:

- Do you often need understanding friends to cheer you up?

- Do you find it very hard to take no for an answer?
- Does your mood often go up and down?
- Do you ever feel 'just miserable' for no good reason?
- Do you suddenly feel shy when you want to talk to an attractive stranger?
- Do you often worry about things you should not have done or said?
- Are your feelings rather easily hurt?
- Are you sometimes bubbling over with energy and sometimes very sluggish?
- Do you daydream a lot?
- Are you often troubled about feelings of guilt?
- Would you call yourself tense or 'highly strung'?
- After you have done something important, do you often come away feeling you could have done better?
- Do ideas run through your head so that you cannot sleep?
- Do you get palpitations or thumping in your heart?
- Do you get attacks of shaking or trembling?
- Are you an irritable person?
- Do you worry about awful things that might happen?
- Do you have many nightmares?
- Are you troubled by aches and pains?
- Would you call yourself a nervous person?
- Are you easily hurt when people find fault with you or your work?
- Are you troubled with feelings of inferiority?
- Do you worry about your health?
- Do you suffer from sleeplessness?

## ***Defining neuroticism in the EPI***

*The Eysenck Personality Inventory Manual* (Eysenck & Eysenck, 1964) gives no description of a typical high neuroticism scorer.

## ***Psychometric properties of the EPI neuroticism scale***

The Manual of the Eysenck Personality Inventory (Eysenck & Eysenck, 1964) reports two ways of assessing the reliability of the Eysenck Personality Inventory repeat reliability (test-retest) and split-half reliability.

Eysenck and Eysenck (1964) using the test-retest method studied two groups of normal subjects. He called them group X and group Y. The time that elapsed between the testing was a year for X and nine months for Y. The results are set out for each group in table 2.2. The reliabilities of the two forms are given separately and a final figure combining the two can be seen in table 2.2. (The superscripts 'A' and 'B' refer to the two forms of each scale; when 'N' is given without the superscript they refer to the combined forms). According to Eysenck & Eysenck (1964) these results are encouragingly high considering the time that elapsed between test and retest.

Table 2.2 Test-Retest reliabilities from Eysenck and Eysenck, (1964)

	Number	N <sup>A</sup>	N <sup>B</sup>	N
Group X	92	0.84	0.81	0.84
Group Y	27	0.88	0.91	0.92

The split-half reliabilities for forms A vs B, for 1,655 normals, 210 neurotics and 90

psychotics were obtained by using the Spearman-Brown prophecy formula. The results are set out in table 2.3. In the light of these results the authors suggest that if individual decisions are to be made on the basis of the inventory, both forms should be used; for experimental studies one form alone may be sufficient.

Table 2.3 Split half reliabilities from Eysenck and Eysenck (1964).

	Normals	Neurotics	Psychotics
N <sup>A</sup> vs N <sup>B</sup>	0.811	0.873	0.906
	(0.896)	(0.932)	(0.951) Forms A&B combined

Knowles and Kreitman (1965) administered the Eysenck Personality Inventory Form A to a sample of 39 people diagnosed as having an anxiety state. They were tested before and after a month's course of treatment. The results showed a significant fall in neuroticism mean scores on retest  $p < .001$ .

Farley (1967) administered the Eysenck Personality Inventory Form A to 1,478 subjects in order to assess the independence of extraversion and neuroticism. The results showed no significant correlations between the two scales, which supports the independence of extraversion and neuroticism.

Mowbray and Davies (1968) administered the Eysenck Personality Inventory Form A to 2,962 Australian medical students after excluding inadequate returns the number in the sample fell to 2,363. The results showed that there is an increase in neuroticism scores from first to second year of study which was significant ( $p < .001$ ). Differences between the means for subsequent years were not significant. Female students showed a significantly higher mean neuroticism score than male students ( $p < .01$ ). When Mowbray and Davies (1968)

compared the Australian students with the British students cited in the *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) they found that the Australian medical students were significantly younger and obtained significantly lower mean neuroticism scores ( $p < .001$ ).

McKerracher and Watson (1968) administered the Eysenck Personality Inventory Form A to all patients referred to the psychology department at a special security hospital. In a two year period 201 males and 63 females were tested. The results show a mean neuroticism score for men of 9.51 (standard deviation of 5.42) and for women a mean neuroticism score of 13.49 (standard deviation of 4.91). Women therefore score significantly higher on the neuroticism than the males ( $p < .01$ ).

Normal distributions were found for both sexes. The males were not significantly different from the normal population whilst the females had a higher score than the normal population ( $p < .01$ ).

### ***Applying the EPI neuroticism scale***

The Eysenck Personality Inventory has, for example, been used to investigate the relationship, between personality and academic performance (Gibbins & Savage, 1965; Kline, 1966), social desirability (Farley, 1966a) and to assess the personality profile of businessmen (Eysenck, 1967).

Gibbins and Savage (1965) used Eysenck Personality Inventory Form A among 60 students at a teaching training institution to assess intelligence, study habits and personality factors in academic success. They found that the relationship between neuroticism and academic

success was almost non-existent ( $r = .088$ ). The data also demonstrate a higher neuroticism score amongst students than the normal population.

Kline (1966) investigated the relationship between academic performance and extraversion and neuroticism among Ghanaian students. He administered the Eysenck Personality Inventory Form A to 110 Ghanaian students at the University College of Science Education, Cape Coast. The sample used to correlate neuroticism and scores in examination, however, was only 49. The results showed that neuroticism was not significantly related to academic performance,  $r = -.229$  (NS).

Farley (1966a) used The Eysenck Personality Inventory Form A to confirm his hypothesis that subjects high in neuroticism should endorse fewer social desirability responses than low neuroticism subjects.

The sample consisted of 100 male subjects, (68 were apprentices at a large motor works near London, and the remaining 32 were paid volunteers taking part in a number of experiments at the Institute of Psychiatry, University of London). The scales used were The Eysenck Personality Inventory Form A, Edwards 39-item social desirability scale (Edwards, 1957) and the Marlowe-Crowne 33-item social desirability scale (Crowne & Marlowe, 1960). The results showed that neuroticism was significantly negatively associated with social desirability responding when using the Marlowe-Crowne Social Desirability Scale ( $p < .01$ ) and when using the Edwards Social Desirability Scale ( $p < .01$ ).

Eysenck (1967) used The Eysenck Personality Inventory Form A to investigate the personality patterns of businessmen. A total of 1,504 businessmen were asked to complete

the Eysenck Personality Inventory Form A and to tick one of 7 categories, delineating different types of jobs: general management, research and development technology, personnel, finance, production, sales, consultancy and more than one of the above. The results showed that the neuroticism scores are low. The different types of position held in business by the eight groups do not significantly differentiate them with respect to neuroticism. Successful businessmen are on the whole stable introverts.

## **Eysenck Personality Questionnaire**

### ***Developing the neuroticism scale in the EPQ***

The Eysenck Personality Questionnaire was developed from the Eysenck Personality Inventory and differs from the Eysenck Personality Inventory in having an additional dimension labelled psychoticism (P). The neuroticism scale consists of 23 items and Eysenck and Eysenck (1975) claim in the *Manual of the Eysenck Personality Questionnaire* that the extraversion and neuroticism scales in the old and new questionnaires are psychometrically equivalent and that any validation data collected with regard to the original scales could therefore 'be assumed to apply with equal force to the new scales' (Eysenck & Eysenck, 1975).

Helmes (1980) noted, however, that only 25 of the 57 extraversion, neuroticism and lie scale items on the Eysenck Personality Inventory were used in the Eysenck Personality Questionnaire (8 extraversion, 4 lie, 13 neuroticism) and that 8 of the 25 common items had been reworded.

The following 10 questions from the neuroticism scale of the Eysenck Personality Inventory have been used in the Eysenck Personality Questionnaire:

- Does your mood often go up and down?
- Do you often worry about things you should not have done or said?
- Are you sometimes bubbling over with energy and sometimes very sluggish?
- Are you often troubled about feelings of guilt?
- Would you call yourself tense or 'highly strung'?
- Are you an irritable person?
- Do you worry about awful things that might happen?
- Would you call yourself a nervous person?
- Do you worry about your health?
- Do you suffer from sleeplessness?

The following three questions have been reworded:

- Do you ever feel 'just miserable' for no reason? / Do you ever feel 'just miserable' for no good reason? (EPI)
- Are your feelings easily hurt? / Are your feelings rather easily hurt? (EPI)
- Are you easily hurt when people find fault with you or the work you do? / Are you easily hurt when people find fault with you or your work? (EPI)

There are 11 questions used in the Eysenck Personality Inventory neuroticism scale which are missing from the Eysenck Personality Questionnaire:

- Do you often need understanding friends to cheer you up?
- Do you find it very hard to take no for an answer?
- Do you suddenly feel shy when you want to talk to an attractive stranger?
- Do you daydream a lot?

- After you have done something important, do you often come away feeling you could have done better?
- Do ideas run through your head so that you cannot sleep?
- Do you get palpitations or thumping in your heart?
- Do you get attacks of shaking or trembling?
- Do you have many nightmares?
- Are you troubled by aches and pains?
- Are you troubled with feelings of inferiority?

In comparison with the extraversion scale of the Eysenck Personality Inventory and the Eysenck Personality Questionnaire relatively little attention has been paid to the internal structure of the neuroticism scale. Goh, King and King (1982) reported satisfactory internal consistency for Eysenck Personality Questionnaire neuroticism scale as did Loo (1979). Loo (1979) did, however, describe two, third order factors, each containing paranoia or a psychopathy component from the psychoticism scale and an anxiety or an emotionality component from the neuroticism scale. The extraction by Loo of anxiety and emotionality components from the Eysenck Personality Questionnaire neuroticism scale is interesting in comparison with the analysis of the Eysenck Personality Inventory neuroticism scale reported by Roger and Nesshoever (1987), who isolated two factors which they labelled hypochondriasis and social sensitivity. The latter factor contains elements of both anxiety and emotionality, and the major difference between the analyses for neuroticism in the Eysenck Personality Questionnaire and neuroticism in the Eysenck Personality Inventory would appear to be the absence of the hypochondriasis component from the Eysenck Personality Questionnaire scale. This is confirmed when looking at neuroticism in the Eysenck Personality Questionnaire questions, as there are significantly fewer items explicitly

related to concern over health.

The analysis by Roger and Morris (1991) on the internal structure of the Eysenck Personality Questionnaire scales failed to uncover a hypochondriasis factor comparable to the one extracted from neuroticism in the Eysenck Personality Inventory by Roger and Nesselroover (1987). They did, however, find the factor called social sensitivity.

Although Eysenck and Eysenck (1975) claim that the neuroticism scale in the Eysenck Personality Questionnaire is psychometrically equivalent to neuroticism in the Eysenck Personality Inventory it can be seen that the hypochondriasis items have been abandoned in the Eysenck Personality Questionnaire neuroticism scale (Roger & Morris, 1991).

### ***Neuroticism scale items in the EPQ***

In the Eysenck Personality Questionnaire neuroticism was assessed by the following 23 items:

- Does your mood often go up and down?
- Do you ever feel 'just miserable' for no reason?
- Do you often worry about things you should not have done or said?
- Are you an irritable person?
- Are your feelings easily hurt?
- Do you often feel 'fed up'?
- Are you often troubled by feelings of guilt?
- Would you call yourself a nervous person?
- Are you a worrier?
- Do you worry about awful things that might happen?

- Would you call yourself tense or ‘highly strung?’
- Do you worry about your health?
- Do you suffer from sleeplessness?
- Have you often felt listless and tired for no good reason?
- Do you often feel life is very dull?
- Do you worry a lot about your looks?
- Have you ever wished that you were dead?
- Do you worry too long after an embarrassing experience?
- Do you suffer from ‘nerves’?
- Do you often feel lonely?
- Are you easily hurt when people find fault with you or the work you do?
- Are you sometimes bubbling over with energy and sometimes very sluggish?
- Are you touchy about some things?

### ***Defining neuroticism in the EPQ***

*The Manual of the Eysenck Personality Questionnaire* (Eysenck & Eysenck, 1975) states that the typical high neuroticism scorer is described as:

an anxious, worrying individual, moody and frequently depressed. They are likely to sleep badly, and to suffer for various psychosomatic disorders. They are overly emotional, reacting too strongly to all sorts of stimuli, and they find it difficult to get back on an even keel after each emotionally arousing experience. Their strong emotional reactions interfere with their proper adjustment, making them react in irrational, sometimes rigid ways...

If the high neuroticism scorer has to be described in one word, one might say that they were a ‘worrier’; their main characteristic is a constant preoccupation with things that might go wrong, and a strong emotional reaction of anxiety on these thoughts.

The stable individual, on the other hand,

tends to respond emotionally only slowly and generally weakly, and to return to baseline quickly after emotional arousal; they are usually calm, even tempered, controlled and unworried.

### ***Psychometric properties of the EPQ neuroticism scale***

Loo (1979) administered the Eysenck Personality Questionnaire to 139 females and 123 males in order to investigate the psychometric properties of the Eysenck Personality Questionnaire. The results show that the reliabilities for the neuroticism scale are in line with those reported in the manual. The results for the neuroticism scale are set out in table 2.4.

Table 2.4 Mean neuroticism scores from Eysenck and Eysenck (1975).

Sample	N	M	SD	Reliability
Females	139	11.92	4.54	.80
Males	123	11.16	5.16	.84
Total	262	11.56	4.86	.82

Francis, Brown and Philipchalk (1992) administered the Eysenck Personality Questionnaire to 685 undergraduate students from England, Canada, the USA and Australia. The results showed an alpha coefficient of .85 for the English sample, .83 for the Canadian sample, .84 for the American sample and .84 for the Australian sample.

Wilson and Doolabh (1992) evaluated the internal consistency of the Eysenck Personality Questionnaire among 670 black Zimbabwean students. The alpha coefficient was .76 for males and .77 for females.

### ***Applying the EPQ neuroticism scale***

Eysenck and Eysenck (1969) used their recently constructed PEN inventory (H. J. Eysenck, & S. B. G Eysenck, 1968; S. B. G. Eysenck & H. J. Eysenck, 1968) to assess the relationship between the three personality variables and age, sex and social class. The inventory, containing 20 extraversion, 20 neuroticism and 20 psychoticism questions, was administered to 1,423 adult males and 968 females as well as to 1,400 students of both sexes and to 327 housewives. Analysis by age, sex and social class showed that young people are high on neuroticism, that males are low on neuroticism compared to the women who have higher neuroticism scores throughout the age ranges and that middle class people are low on neuroticism.

Williams, Francis and Durham (1976) administered the PEN personality inventory to a group of people undertaking transcendental meditation. The results showed that male meditators (n = 39) were more neurotic than the normal population.

Furnham and Zacherl (1986) examined the relationship between personality and job satisfaction. They used the Eysenck Personality Questionnaire alongside the Index of Organisational Reactions (IOR, Smith, 1976; Smith, 1977) and the Job Function Questionnaire (JFQ, Zackerl, 1984) among 88 people employed in the computer business. The results showed that people scoring high on neuroticism tended to have lower job satisfaction.

Hernandez and Mauger (1980) used the Eysenck Personality Questionnaire to assess the relationship between assertiveness, aggressiveness and personality. Assertiveness and aggressiveness were measured by the Interpersonal Behaviour Survey (IBS, Mauger, Adkinson, Hernandez, Hook & Firestone, 1978). Two samples were used: sample one

consisted of 12 psychiatric inpatients, 67 college students and 69 state prison inmates; sample two consisted of 50 psychiatric patients. The results showed a significant negative correlation between neuroticism and assertiveness, and a significant positive correlation between neuroticism and aggression.

Rim (1984) used the Eysenck Personality Questionnaire to explain poverty from a personality aspect. A total of 137 subjects aged between 18 and 36 were asked to rate on a 7-point scale the importance of 15 explanations of poverty: four were individualistic explanations; seven were social explanations and four were fatalistic explanations. The results showed that subjects with low neuroticism scores, tend to give more individualistic and fatalistic explanations and high neuroticism scorers give more social explanations.

Gossop and Eysenck (1983) used the Eysenck Personality Questionnaire to compare the personality of drug addicts in treatment with that of a prison population. A total of 1,226 subjects took part in the study, 221 made up the drug-dependant sample and 934 males and 71 females made up the prison population. The results showed that the drug addicts returned higher neuroticism scores than the prison population.

Furnham (1984) used the Eysenck Personality Questionnaire among 70 students at a sixth-form college in South-East England to assess the relationship between personality and values. The results showed that the neuroticism factor is a more explicit predictor of values than the extraversion factor.

Caird (1987) administered Hood's mystical experience scale (Hood, 1975) and the Eysenck Personality Questionnaire to 115 students enrolled in first-year Religious Studies at the

University of Queensland. The results do not offer any support for the view that mystical experience is linked with neuroticism.

Hills and Argyle (1998) used the Eysenck Personality Questionnaire among 275 individuals alongside a scale of ten items to assess church membership. The results showed that church members had low neuroticism scores ( $p < .001$ ).

## **The Revised Eysenck Personality Questionnaire**

### ***Developing the neuroticism scale in the EPQR***

After publishing the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) there appeared a number of criticisms of the psychometric properties of the psychoticism scale (Block, 1977a; Block, 1977b; Bishop, 1977). In an attempt to improve the psychoticism scale Eysenck, Eysenck and Barrett (1985) attempted to increase the internal reliability of the scale, improve the shape of distribution and increase the mean and variance score. The neuroticism scale remained relatively unchanged. The new scale consists of 32 psychoticism items, 23 extraversion items and 24 neuroticism items.

The neuroticism scale has one more item than in the Eysenck Personality Questionnaire. The extra item is:

- When your temper rises, do you find it difficult to control?

The reliability of the scale gives an alpha coefficient of .88 for males and .85 for females which is similar to the previous scale reliability.

### ***Neuroticism scale items in the EPQR***

In the Revised Eysenck Personality Questionnaire neuroticism is assessed by the following 24 items:

- Does your mood often go up and down?
- Do you ever feel 'just miserable' for no reason?
- Do you often worry about things you should not have done or said?
- Are you an irritable person?
- Are your feelings easily hurt?
- Do you often feel 'fed up'?
- Are you often troubled by feelings of guilt?
- Would you call yourself a nervous person?
- Are you a worrier?
- Do you worry about awful things that might happen?
- Would you call yourself tense or 'highly strung'?
- Do you worry about your health?
- Do you suffer from sleeplessness?
- Have you often felt listless and tired for no good reason?
- Do you often feel life is very dull?
- Do you worry a lot about your looks?
- Have you ever wished that you were dead?
- Do you worry too long after an embarrassing experience?
- Do you suffer from 'nerves'?
- Do you often feel lonely?
- Are you easily hurt when people find fault with you or the work you do?
- Are you sometimes bubbling over with energy and sometimes very sluggish?
- Are you touchy about some things?

- When your temper rises, do you find it difficult to control?

### ***Defining neuroticism in the EPQR***

*The Manual of the Eysenck Personality Scales* (Eysenck & Eysenck, 1991) states that the typical high neuroticism scorer is described as:

an anxious, worrying individual, moody and frequently depressed. They are likely to sleep badly, and to suffer for various psychosomatic disorders. They are overly emotional, reacting too strongly to all sorts of stimuli, and they find it difficult to get back on an even keel after each emotionally arousing experience. Their strong emotional reactions interfere with their proper adjustment, making them react in irrational, sometimes rigid ways...

If the high neuroticism scorer has to be described in one word, one might say that they were a 'worrier'; their main characteristic is a constant preoccupation with things that might go wrong, and a strong emotional reaction of anxiety on these thoughts.

The stable individual, on the other hand,

is a quiet retiring sort of person, introspective, fond of books rather than people; they are reserved and distant except to intimate friends. They tend to plan ahead, 'look before they leap' and distrust the impulse of the moment. They do not like excitement, they take matters of everyday life with proper seriousness, and like a well-ordered mode of life. They keep their feelings under close control, seldom behave in an aggressive manner, and do not lose their temper easily. They are reliable, somewhat pessimistic, and place great value on ethical standards.

### ***Psychometric properties of the EPQR neuroticism scale***

San-Martini and Mazzotti (1990) administered an Italian version of the Revised Eysenck Personality Questionnaire to 306 undergraduate students. The results showed a mean score of 12.9 (standard deviation of 4.9) and an alpha coefficient of .82. The neuroticism scale shows a similar internal reliability as the earlier edition of this scale.

Wilson and Doolabh (1992) evaluated the internal consistency of the Revised Eysenck

Personality Questionnaire among 670 black Zimbabwean students. The alpha coefficient was .76 for the men and .77 for the women.

Eysenck, Barrett and Barnes (1993) administered the Revised Eysenck Personality Questionnaire to 615 male and 642 female Canadians. The results showed an alpha coefficient of .87 for the men and .86 for the women.

San-Martini, Mazzotti and Setaro (1996) administered an Italian version of the Revised Eysenck Personality Questionnaire to 553 subjects. The results are similar to the older version, the alpha coefficient for males is .82 and .83 for females on the neuroticism scale.

Strelau and Zawadzki (1997) administered a Polish version of the Revised Eysenck Personality Questionnaire (Drwal, 1995) to 1,817 people. The results showed an alpha coefficient of .87 for the neuroticism scale, which reveals a slightly higher internal reliability than the neuroticism scale of the Eysenck Personality Questionnaire.

Ortet, Ibanez, Moro, Silva and Boyle (1999) administered a Spanish version of the Revised Eysenck Personality Questionnaire to 527 men and 583 women to assess the psychometric properties of Eysenck's revised psychoticism scale cross culturally. The alpha coefficient for the men was .86 and .86 for the women. Test-retest reliabilities using a sample of 159 subjects was .86 which indicates that the scales are highly reliable and stable.

### ***Applying the EPQR neuroticism scale***

The Revised Eysenck Personality Questionnaire has been used for example, to assess personality and religion (Heaven, 1990), personality and drug addiction (Lodi & Thakur,

1993) and personality and mood (Yeung & Hemsley, 1996; Merten & Ruch, 1996).

Heaven (1990) administered the Revised Eysenck Personality Questionnaire and the Value Survey (Braithwaite & Law, 1985) to 185 Australian adolescents. The results showed that higher scores on the neuroticism scale were observed to correlate significantly with traditional religiosity ( $p < .01$ ) and religious commitment ( $p < .01$ ) for males but not for females.

Lodi and Thakur (1993) administered the Revised Eysenck Personality Questionnaire in Marathi to a sample of 58 male crude-heroin ('brown sugar') addicts and a comparison group of 58 male non-addicts. The results showed that the addicts scored higher on the neuroticism scale than the comparison group.

Yeung and Hemsley (1996) administered the Revised Eysenck Personality Questionnaire among 44 women to assess the effects of personality and acute exercise on mood states. The results showed that those with higher neuroticism scores experience a greater reduction in negative affect. Indicating that higher neuroticism scorers benefited the most from the stress alleviating affects of exercise.

Merten and Ruch (1996) administered the German Version of the Revised Eysenck Personality Questionnaire and Carroll's Rating Scale of Depression both conventionally in the written forms and in computerised form in order to compare the results. They found no differences between the two modes of application.

# **The Revised Eysenck Personality Questionnaire: short form**

## ***Developing the EPQR-short form***

Having produced the 100 item Revised Eysenck Personality Questionnaire to improve the psychometric properties of the psychoticism scale, the authors thought it desirable to devise a short scale of the Revised Eysenck Personality Questionnaire for use when time is limited. Twelve items were chosen from each of the scales. The 12 item neuroticism scale has an alpha coefficient of .84 for the males and .80 for the females.

## ***Neuroticism scale items in the EPQR-short form***

In the short form of the Revised Eysenck Personality Questionnaire neuroticism was assessed by the following 12 items:

- Does your mood often go up and down?
- Do you ever feel 'just miserable' for no reason?
- Are you an irritable person?
- Are your feelings easily hurt?
- Do you often feel 'fed up'?
- Would you call yourself a nervous person?
- Are you a worrier?
- Would you call yourself tense or highly strung?
- Do you worry too long after an embarrassing experience?
- Do you suffer from 'nerves'?
- Do you often feel lonely?
- Are you often troubled by feelings of guilt?

### ***Defining neuroticism in the EPQR-short form***

Since the short form of the Revised Eysenck Personality Questionnaire is explicitly derived from the parent edition of the Revised Eysenck Personality Questionnaire no separate definition of neuroticism has been provided in the literature in respect of the short form scale.

### ***Psychometric properties of the EPQR-short form neuroticism scale***

Francis and Pearson (1988) administered the short form of the Revised Eysenck Personality Questionnaire to 181, 15 and 16 year olds. The results showed an alpha coefficient of .79 on the neuroticism scale.

Francis, Brown and Philipchalk (1992) administered the Eysenck Personality Questionnaire and the short form of the Revised Eysenck Personality Questionnaire to 685 undergraduate students from England, Canada, the USA and Australia. The results showed an alpha coefficient of .82 for the English sample, .80 for the Canadian sample, .78 for the American sample and .80 for the Australian sample.

Wilson and Doolabh (1992) evaluated the internal consistency of the short form of the Revised Eysenck Personality Questionnaire among 670 black Zimbabwean students. The results showed an alpha coefficient of .66 for the males and .67 for the females.

### ***Applying the EPQR-short form neuroticism scale***

The short form of the Revised Eysenck Personality Questionnaire has been used for example, to measure the relationship between personality and error (Pearson, 1989; Pearson, 1990a).

Pearson (1989) administered the short form of the Revised Eysenck Personality Questionnaire and the Gibson spiral maze test of the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gellard, 1979) to 46 psychogeriatric patients. The results showed no significant relationship between neuroticism and error score.

Pearson (1990a) administered the short form of the Revised Eysenck Personality Questionnaire and the Gibson spiral maze test of the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gellard, 1979) to 32 psychogeriatric patients suffering from depression and anxiety and 34 psychogeriatric patients diagnosed as suffering from dementia. The results showed no significant relationship between neuroticism and error score.

## **The Revised Eysenck Personality Questionnaire: abbreviated form**

### ***Developing the EPQR-A***

The abbreviated form of the Revised Eysenck Personality Questionnaire was developed by Francis, Brown and Philipchalk (1992) because it was felt that the short form of the Revised Eysenck Personality Questionnaire was still too long. In developing the abbreviated form the authors used data from England, Canada, the USA and Australia and the total sample consisted of 685 undergraduate students. They administered both the Eysenck Personality Questionnaire and the short form of the Revised Eysenck Personality Questionnaire to 59 men and 153 women in England, 57 men and 92 women in Canada, 51 men and 81 women in the USA and 52 men and 139 women in Australia. The results on the neuroticism scale recorded alpha coefficients of .76 for the English sample, .69 for the Canadian sample, .71 for the American sample and .72 for the Australian sample. On the basis of these results the

authors suggest that the reliability and validity of the 6-item scales of the abbreviated form of the Revised Eysenck Personality Questionnaire can be recommended as a functional equivalent to the short form of the Revised Eysenck Personality Questionnaire

### ***Neuroticism scale items in the EPQR-A***

In the abbreviated Revised Eysenck Personality Questionnaire neuroticism was assessed by the following 6 items:

- Does your mood often go up and down?
- Do you often feel fed up?
- Would you call yourself a nervous persons?
- Are you a worrier?
- Do you suffer from nerves?
- Do you often feel lonely?

### ***Defining neuroticism in the EPQR-A***

Since the abbreviated form of the Revised Eysenck Personality Questionnaire is explicitly derived from the parent edition no separate definition of neuroticism has been provided in the literature in respect of this abbreviated scale.

### ***Psychometric properties of the EPQR-A neuroticism scale***

Maltby (1995b) administered the abbreviated form of The Revised Eysenck Personality Questionnaire and asked 92 US female students about their frequency of church attendance and personal prayer in order to assess the relationship between personality and religion. The results showed an alpha coefficient of .75.

Maltby, Talley, Cooper and Leslie (1995) administered the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987), the age Universal I-E scale (Gorsuch & Venable, 1983) and the abbreviated form of the Revised Eysenck Personality Questionnaire. The results showed an alpha coefficient of .80 for neuroticism.

Lewis and Maltby (1996) administered the abbreviated form of the Revised Eysenck Personality Questionnaire to 100 male students. The alpha coefficient was .77.

Maltby (1999) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and an amended version of the age Universal I-E scale (Gorsuch & Venable, 1983) to two groups of students. The first sample comprised 213 students from England and the second sample comprised 172 students from Ireland. The results show an alpha of .80 for the English sample and .82 for the Irish sample.

### ***Applying the EPQR-A neuroticism scale***

The abbreviated form of the Revised Eysenck Personality Questionnaire has been used, for example, to assess the relationship between personality and religion (Maltby 1995b; Maltby, Talley, Cooper & Leslie, 1995; Maltby, 1999).

Maltby (1995b) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and asked 92 US female students about their frequency of church attendance and personal prayer in order to assess the relationship between personality and religion. There was no significant relationship between neuroticism and personal prayer and church attendance.

Maltby, Talley, Cooper and Leslie (1995) administered the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987), the age Universal I-E scale (Gorsuch & Venable, 1983) and the abbreviated form of the Revised Eysenck Personality Questionnaire in order to assess the relationship between personality and religion. The results showed no relationship between religion and neuroticism.

Maltby (1999) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and an amended version of the age Universal I-E scale (Gorsuch & Venable, 1983) to two groups of students to assess religious orientation and personality. The first sample comprised 213 students from England and the second sample comprised 172 students from Ireland. The results show no significant association between religion and personality on the neuroticism scale.

### ***Summary***

This chapter has set out the theory and development of the higher order factor of neuroticism as proposed by Eysenck and his associates. The construct known as neuroticism is understood initially in terms of anxiety, self-esteem and health and the questions in the Maudsley Medical Questionnaire reflect this. The description of neuroticism given by Eysenck (1947) is one that describes people as exhibiting anxiety and depressive symptoms.

As Eysenck developed the neuroticism scale and published the Maudsley Personality Inventory (Eysenck, 1959) he retained in that scale only four items in their entirety from the Maudsley Medical Questionnaire. The new questions ask the respondent about their ability to relate to others and their self-esteem. The description given of high scorers on the neuroticism scale reveals a person troubled about feelings of inferiority and self-

consciousness. There is a shift in the Maudsley Personality Inventory towards a person's self-esteem which moves the construct known as neuroticism away from health and anxiety.

The third personality scale developed by Eysenck and Eysenck (1964) is the Eysenck Personality Inventory. They claim, however, not to have changed the neuroticism scale and that the scale is 'sufficiently similar to the Maudsley Personality Inventory that the findings reported for the older instrument still apply.' This is difficult to believe as only 3 questions from the Maudsley Personality Inventory are used in their entirety. Eysenck and Eysenck (1964) give no description of a 'typical' person scoring high on the neuroticism scale. The questions included in Form A of the scale ask the respondent about their health, their moods and their ability to sleep. Eysenck and Eysenck (1964) seem to be moving back to their original understanding of neuroticism with its emphasis on health and anxiety.

The fourth scale developed by Eysenck and Eysenck (1975) is the Eysenck Personality Questionnaire and they claim again that the 'neuroticism scale in the old and new questionnaires are psychometrically equivalent and that any validation data collected with regard to the original scales could therefore be assumed to apply with equal force to the new scale.' Only 13 of the neuroticism items included in the Eysenck Personality Inventory appear in the 23 item neuroticism scale of the Eysenck Personality Questionnaire and it is difficult to agree with Eysenck and Eysenck when they say they are measuring the same construct known as neuroticism in both scales. In the Eysenck Personality Questionnaire there appears to be two factors being measured hypochondriasis and social sensitivity. Social sensitivity includes both anxiety and emotionality. The description given by Eysenck and Eysenck (1975) emphasises this understanding and claims that the high neuroticism scorer can be described in one word a 'worrier.'

The fifth scale Eysenck and Eysenck developed is the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck & Barrett, 1985) and they have removed only one item from the Eysenck Personality Questionnaire and so can claim that the same construct known as neuroticism is being measured. The short form of the Revised Eysenck Personality Questionnaire reduces the number of items in the neuroticism scale to 12 and the abbreviated form of the Revised Eysenck Personality Questionnaire (Francis, Brown and Philipchalk, 1992) reduces the scale further to 6 items.

It is clear from this review that the higher order personality dimension of neuroticism remains quite fluid in the different scales that Eysenck develops and there is a different balance of items in the different versions of the Eysenckian neuroticism scales. Two consequences emerge from this observation. First, it may not always be sensible to generalise findings derived from the application of one edition of the neuroticism scale to all editions of the scale. Second, when significant correlations are established between neuroticism and other variables it may not always be possible to understand or know which components of the higher order dimension of personality are in fact contributing to the relationship. There may be advantages, therefore, in employing an instrument which deliberately sets out to identify the component factors contributing to neuroticism and to measure these factors separately. The Eysenck Personality Profiler is discussed in chapter six and sets out the measurement of the different component parts of neuroticism.

# 3 Extraversion

## Overview

This chapter will explore Eysenck's theory of extraversion as it has developed through the various personality questionnaires he has constructed beginning with Maudsley Personality Inventory (Eysenck, 1953) and ending with the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991). The aim of this chapter is to investigate the construct known as extraversion and to assess whether the understanding and measurement of this higher order dimension remains the same as it develops through the different scales proposed by Eysenck and his associates.

The chapter will be sub-divided chronologically by the name of the questionnaire and each of the sub-divisions will look at the development of the instrument, the items that make up the construct known as extraversion, the definition and understanding given by Eysenck of the construct known as extraversion, the psychometric properties of the extraversion scale, examples of research undertaken using the extraversion scale and a summary of the findings.

## Maudsley Personality Inventory

### *Developing the extraversion scale of the MPI*

The first scale Eysenck constructed to measure extraversion was the Maudsley

Personality Inventory (MPI, Eysenck, 1959). It was the second of Eysenck's personality scales and developed from the Maudsley Medical Questionnaire which was constructed to measure neuroticism. It was whilst revising the Maudsley Medical Questionnaire scale that Eysenck took the opportunity to carry out some research into the possibility of constructing a scale for the measurement of extraversion.

In carrying out this research Eysenck investigated the factor analysis of Lovell (1945) and North (1949) and the Guilford Questionnaires (for development of this work, Guilford, & Guilford, 1934, 1936, 1939a, 1939b) as it had been suggested that Guilford's R scale may be a good index of extraversion. It was decided, however, not to use the scales in their entirety because there were certain weaknesses in the Guilford scales.

The first weakness according to Eysenck was the fact that the scales were long and repetitive. The second weakness was felt to be that little attention had been given to the possible importance of sex differences when the scales were constructed.

The third weakness was a concern that some of the items included in the R scale correlated very little, if at all, with the total score on R, where items from other scales correlated quite highly with the total R scale. Indeed Eysenck decided to try and improve the validity of the R scale as a possible measure of extraversion by carrying out an item analysis which would enable the poor items to be disregarded and then new items to be included from other scales, provided that these showed high relationships with the R score.

The fourth weakness concerned the scales as unitary factors. Guilford presented his scales as unitary factors but empirically it appeared that this hypothesis was not in fact always borne out, particularly in the case of the S (social shyness) scale. It appeared that some items on the S scale were measures of an introverted type of social shyness, whereas others were measures of a neurotic type of social shyness. The total S scale consequently breaks up into two relatively unrelated parts.

Using this information, Eysenck constructed a questionnaire containing 261 items. Included in the questionnaire were all the items from the Guilford scales of S (social shyness), D (depression), C (emotionality, neuroticism), R (rhythymia, freedom from care), G (general activity), A (alertness) and all the items of the Maudsley Medical Questionnaire (Eysenck, 1952). This was included in order to obtain evidence on the relationship between extraversion, as measured by Maudsley Medical Questionnaire, and Guilford's R scale.

The questionnaire was administered to 200 men and 200 women, all of whom were British born and over 18 years of age. The majority of the sample was in the 20-35 year age range and most of them were upper middle, lower middle and skilled working class. Administration of the questionnaire was anonymous. Various analyses were carried out on the data. On the basis of the results two questionnaires were prepared in the hope that these might prove to be improved measures of extraversion-introversion and neuroticism as compared with the R and C scales.

After extensive analysis Eysenck produced a 48 item questionnaire known as the Maudsley Personality Inventory (Eysenck, 1959) which consists of 24 extraversion-introversion items and 24 neuroticism items. The responses requested to the questionnaire differ to that of the Maudsley Medical Questionnaire. Now the respondents are asked to answer the questions by putting a circle round Yes or No and an option was given for those who could not agree or disagree with the statement by circling the question mark (?).

The principles governing the selection of questions were as follows: all items in the neuroticism scale should have significant relations with the C scale for both men and women. Items in the extraversion scale, conversely, were chosen in such a way that all had significant relations with the R scale for both men and women, but not with the C scale.

Various other requirements were also borne in mind. Thus, an attempt was made to select only items where chi square values for men and women were not too dissimilar; where differences between the sexes were observed on one item another item was selected in such a way as to balance the disproportion. In this way it was hoped to obtain scales which could be used for both sexes equally. Another requirement was that items should not be mere duplicates of each other, slightly changed in wording, but should cover different aspects of neuroticism, or of extraversion-introversion.

According to Guilford (1975) included in the Maudsley Personality Inventory are 44 Guilford factors (sic). Twenty-four make up the extraversion scale, and include 12 R items, 10 S items, 1 A item and 1 G item. This contradicts Eysenck and Eysenck (1969), who say that the Guilford scales used are S, D, C, R, G, A. Bendig (1962) confirms Eysenck's claim. Whilst Jensen (1958) asserts that the Maudsley Personality Inventory is made up of the 'factors of S, T, D, C, R from the Guilford Inventory' and McGuire, Mowbray, and Vallance (1963) claim that Eysenck uses C, R, S, G, A but no D scale.

There is just one item from the Maudsley Medical Questionnaire included in the Maudsley Personality inventory, the question however, has been reworded.

- Are you inclined to keep in the background on social occasions? / Do you usually keep in the background on social occasions? (MMQ)

### ***Extraversion scale items in the MPI***

In the Maudsley Personality Inventory extraversion was assessed by the following 24 scale items:

- Are you inclined to limit your acquaintances to a select few?
- Do you prefer action to planning for action?
- Do you nearly always have a 'ready answer' for remarks directed at you?
- Are you inclined to be quick and sure in your actions?
- Are you inclined to take your work casually, that is, as a matter of course?
- Do you like to mix socially with people?
- Are you inclined to be shy in the presence of the opposite sex?

- Are you inclined to be over conscientious?
- Do you like to play pranks upon others?
- Do you ever take your work as if it were a matter of life or death?
- Can you usually let yourself go and have an hilariously good time at a gay party?
- Are you inclined to keep quiet when out in a social group?
- Would you rate yourself as a talkative individual?
- Would you be very unhappy if you were prevented from making numerous social contacts?
- Are you happiest when you get involved in some project that calls for rapid action?
- Do other people regard you as a lively individual?
- Do you generally prefer to take the lead in group activities?
- Would you rate yourself as a happy-go-lucky individual?
- Would you rate yourself as a lively individual?
- Do you like to have many social engagements?
- Is it difficult to 'lose yourself' even at a lively party?
- Do you like work that requires considerable attention to details?
- Are you inclined to keep in the background on social occasions?
- Do you usually take the initiative in making new friends?

### ***Defining extraversion in the MPI***

Eysenck (1959) suggested that extraversion as opposed to introversion, refers to the outgoing, uninhibited, sociable inclination of a person.

### ***Psychometric properties of the MPI extraversion scale***

Eysenck (1956) quotes a split-half reliability coefficient of .831 extraversion and a low correlation of  $-.09$  between extraversion and neuroticism, which supports the independence of the extraversion scale.

Jensen (1958) using split half reliability found that among normal adult males and females the extraversion scale was high, .85 for normal adult males; .82 for normal adult females, making a split-half reliability of .83 for the two combined.

Eysenck in *The Manual of the Maudsley Personality Inventory* (1959) quote both split half and Kuder-Richardson reliability coefficients, for extraversion Eysenck gives a reliability of between .75 and .85 for many samples but does not give any details about the samples.

Knowles (1960) using the Maudsley Personality Inventory predicted that test-retest correlations for extraversion in neurotic and normal populations would not differ significantly. Using a sample of 93 surgical patients and 63 psychotic patients with a clearly neurotic diagnosis, Knowles found on retesting his sample a year after the first testing that the results for extraversion showed a retest correlation of .77 and .79 for the normal and neurotic patients respectively. Since these values are almost identical, and virtually the same as the split-half reliability of the scale (.80), it was agreed that the prediction for extraversion was confirmed.

Bolardos (1964) administered the Maudsley Personality Inventory in Portuguese to 60 normal and 51 neurotic subjects of whom 19 were diagnosed as hysterics and 32 as dysthmics. On the extraversion scale it was found that hysterics had a score of 27.8 while dysthmics had a score of 17.9 ( $p < .01$ ).

Jalota (1965) administered a Punjabi version of the Maudsley Personality Inventory to 75 male and 75 female students at the Punjabi University, Chandigarh. The mean extraversion scores for males and females combined was 27.8 with a standard deviation of 6.2; this corresponds with the English norms of 24.9 and a standard deviation of 9.7. There was no significant differences between the male and female groups and the data suggest that the Punjabi group was slightly more extraverted than the English standardization group. The reliability of the neuroticism scale was 0.53. The correlation between neuroticism and extraversion was  $-.22$ .

Hannah, Storm and Caird (1965) administered the Maudsley Personality Inventory and the Fear Survey Schedule to 1,958 male and female undergraduates. Their results show a mean extraversion score of 27.93 with a standard deviation of 9.33.

Gutman (1966) administered the Maudsley Personality Inventory to 1,419 Canadian subjects. There were 832 males and 587 females between the ages of 17 and 94. The results show that the mean extraversion scores for the total sample of males was 25.70 with a standard deviation of 8.53 and for the females 25.14 with a standard deviation of

8.50 which was not significantly different.

Singh (1966) investigated the reliability of a Hindi version of the Maudsley Personality Inventory with a group of 100 male non-criminals. The results show that the product-moment correlation for extraversion was .54. Singh used the Spearman-Brown formula as the index of reliability and found a value of .71 for extraversion. Singh also found that the scale of extraversion and neuroticism were independent of each other.

Table 3.1 Mean extraversion scores from H. J. Eysenck and S. B. G. Eysenck (1969).

Group	N	M	SD
Normals	1800	24.91	9.71
Schizophrenics	40	22.88	8.36
Affectives	40	24.25	9.84
Manics	20	28.80	7.66
Depressives	20	19.70	9.83
Total Psychotics	80	23.56	9.10
Neurotics	60	31.35	10.11

H. J. Eysenck and S. B. G. Eysenck (1969) administered the Maudsley Personality Inventory to a large number of subjects, both normal and neurotic. The original sample of 200 men and women on whom item analysis and factor analysis was carried out was supplemented by groups of students, industrial apprentices, nurses and neurotic groups including prisoners and sufferers from psychotic disorders. They report mean extraversion scores for specific groups which are presented in table 3.1.

A number of studies were conducted using the Maudsley Personality Inventory resulting in a number of criticisms. These criticisms raised fundamental problems. Two of the main problems were expressed by Carrigan (1960) and were concerned with the 'unidimensionality' of extraversion and the 'independence' of extraversion and neuroticism.

Carrigan's (1960) conclusion about the 'unidimensionality' of extraversion is that: 'The unidimensionality of extraversion/introversion has not been conclusively demonstrated;' she further points out that several joint analyses of the Guilford and Cattell questionnaires show 'that at least two independent factors are required to account for the intercorrelations between the extraversion- introversion variables.' These factors she argues are related to the American conception of extraversion with its emphasis on sociability and ease in interpersonal relations and to the European conception of extraversion with its emphasis on impulsiveness and 'weak superego controls.'

Carrigan (1960) concludes that a 'good case can be made for identifying social extraversion as a factor of 'well-adjusted' extraversion.' Lack of self-control on the other hand may reflect 'maladjusted extraversion.'

In order to address this problem of whether sociability and impulsiveness items are or are not correlated Eysenck and Eysenck (1963) carried out a further experiment. A special questionnaire was constructed containing 66 extraversion/introversion and neuroticism items along with an 18 item lie scale. The sample consisted of a total of 300 (133 men

and 167 women). The results showed that the two aspects of sociability and impulsivity correspond well with the two types of extraversion postulated by Guilford (1934).

A further study was undertaken to check independently the points raised and a questionnaire was administered to 300 subjects and scores obtained for neuroticism alongside those of sociability and impulsiveness. The results of this study suggest that there is some truth in the suggestion that sociability is an aspect of extraversion, which shows some correlation with good adjustment, and that impulsiveness is an aspect of extraversion, which shows some correlation with poor adjustment. It also became clear that these two aspects of extraversion show a reasonably close relationship as indicated by the correlation between sociability and impulsiveness of approximately .5. This study also proved that neuroticism and extraversion are independent.

Bendig (1962) administered the Guilford Zimmerman Temperament Survey (GZTS) and the Maudsley Personality Inventory to two samples of male subjects (N =54 and 58). Scores from the 12 item scale included in the two inventories were separately inter-correlated for each sample. The results showed that the Maudsley Personality Inventory extraversion scale loaded on the social activity scale as defined by the GZTS general activity, ascendance and sociability scales rather than the extraversion-introversion factor defined by the GZTS restraint and thoughtfulness scales. It was suggested that because of the pool of items used by Eysenck in constructing the Maudsley Personality Inventory extraversion scale this scale does not measure the factor it was originally intended to measure

McGuire, Mowbray and Vallance (1963) tested the reliability of the Maudsley Personality Inventory by using the same split-half reliability as Eysenck (1956) and discovered that their reliability of .81 for extraversion compared favourably with Eysenck. When the authors investigated the way in which Eysenck had split the scale they discovered that the two halves of each scale were almost identical. For example compare item 10 'Are you inclined to be moody?' With item 11 'Do you have frequent ups and downs in mood, either with or without apparent cause?' or item 14 'Are you inclined to keep in the background on social occasions?' with item 36 'Are you inclined to keep quiet when out in social groups?' Examination of the questionnaire shows similar resemblances between questions 13 and 31, 15 and 33, 17 and 35, 16 and 38, 9 and 22. This is surprising when one of the reasons given by Eysenck for not using Guilford's scales was the nature of their repetitiveness which added nothing to their reliability.

In order to check the reliability of the scale, McGuire, Mowbray and Vallance (1963) undertook a different splitting of items. They split the items by including the similar questions in the same half. This revealed lower reliability coefficients. On the extraversion scale the new split-half reliability is .61.

Sparrow and Ross (1964) replicated a study by Eysenck and Eysenck (1963) on the dual nature of extraversion. They administered an experimental questionnaire containing Eysenck's original Maudsley Personality Inventory and 12 further items selected from Eysenck and Eysenck (1963). The subjects were 170 Australian male junior naval

recruits. Their results confirm Eysenck and Eysenck (1963) that two clusters emerge through factor analysis, those of sociability and impulsiveness.

### *Applying the MPI extraversion scale*

The Maudsley Personality Inventory has been used, for example, quite widely to measure personality and academic achievement (Lynn, 1959, Savage, 1962); personality and vocational interest (Bendig, 1963); personality and study habits (Estabrook & Sommer, 1966); personality and fear (Hannah, Storm & Caird, 1965); and personality and religion (Roberts, 1965, Chlewinski, 1981).

Lynn (1959) used the Maudsley Personality Inventory to assess the relationship between the two personality characteristics of neuroticism and extraversion and academic achievement. The sample consisted of 115 male students and 96 female students and the control groups consisted of 67 female occupational therapy students and 100 male apprentices. The results showed that male university students were significantly less extraverted than the apprentices and female university students were significantly less extraverted than occupational therapy students.

Savage (1962) administered the Maudsley Personality Inventory to 168 male and female students who were entering the Arts Faculty of New England University in 1959, 1960 and 1961 in order to assess the relationship between personality and academic performance. The results showed that extraversion is significantly related to academic performance with a negative correlation of  $-0.9$  ( $p < .05$ ).

Bendig (1963) administered the Strong Vocational Interest Blank (SVIB) and the Maudsley Personality Inventory to 234 college freshmen (115 men and 119 women). The results showed that the extraversion scale was negatively correlated with SVIB scales in Strong's area I (general professional), II (science and engineering), and IV (practical) for both sex groups. Extraversion was positively correlated with area V (social service) and negatively correlated with areas VIII (business) and III (production manager) for men, while extraversion was positively correlated with interests in area IX (sales) for women. Extraversion was negatively related to the author-journalist interest scale for both sexes.

The Maudsley Personality Inventory has been used by Estabrook and Sommer (1966) to investigate the study habits of introverted and extraverted students. A 12 item questionnaire dealing with study habits was administered to 130 students along with the introversion-extraversion scale of the Maudsley Personality Inventory. The results showed that there was no difference in the most effective study time, but introverts studied more on Friday nights than extraverts. Introverts tended to study at a desk whilst extraverts preferred to sit on a couch or on a bed. Extraverts snacked considerably more than introverts. When taking a break extraverts preferred to have the break with other people. Finally, introverts tended to earn higher grade point averages than extraverts do.

Hannah, Storm and Caird (1965) administered the Maudsley Personality Inventory and the Fear Survey Schedule to 1,958 male and female undergraduates. Their results showed

that the men were slightly more extraverted than the females but not significantly so.

Roberts (1965) administered the Maudsley Personality Inventory to 43 volunteer students from a conservative evangelical theological college alongside an interview to gain information about the students' personality and religious conversion experiences. The results showed that extraversion was not significantly correlated with type of conversion. There was however, a tendency ( $p < .01$ ) for those whose conversion was slow and to a different faith than the one they were brought up in, to have low extraversion scores when compared with the remainder of the sample.

Chlewinski (1981) investigated the hypothesis that religious people are more introverted than atheists. He used the Maudsley Personality Inventory and the results showed that atheists were significantly more extraverted compared to the religious group ( $p < .01$ ).

## **The Maudsley Personality Inventory: short form**

### ***Developing the extraversion scale of the short form of the MPI***

Eysenck (1958) constructed a short form of the Maudsley Personality Inventory. This short form consisted of 12 of the most diagnostic questions. There were 6 neuroticism items and 6 extraversion items. The questions had been selected from a previous item-analytic and factor-analytic study.

In order to test the short form of the Maudsley Personality Inventory the 12 questions were given to 1,600 men and women at the end of an interview in which a number of

questions were asked about commercial products. Each question answered 'yes' was scored plus one point for extraversion; each question answered 'no' was scored minus one point for extraversion. No points were given for answers which could not be clearly classified as either 'yes' or 'no'. The possible range of scores according to Eysenck (1958) on either factor is therefore from plus six points to minus six points, a total of 12 points.

Correlations were calculated between the 12 items and a factor analysis performed; this disclosed two orthogonal factors clearly identical with those of the previous analysis. The split-half reliability is .71 for extraversion and the correlation between extraversion and neuroticism is  $-.05$ .

### ***Extraversion scale items in the short form of the MPI***

In the short form of the Maudsley Personality Inventory extraversion was assessed by the following 6 items:

- Do you prefer action to planning for action?
- Are you happiest when you get involved in some project that calls for rapid action?
- Do you usually take the initiative in making new friends?
- Are you inclined to be quick and sure in your actions?
- Would you rate yourself as a lively individual?
- Would you be very unhappy if you were prevented from making numerous social contacts?

### ***Defining extraversion in the short form of the MPI***

Since the short form of the Maudsley Personality Inventory extraversion scale is explicitly derived from the parent edition of the Maudsley Personality Inventory no separate definition of extraversion has been provided in the literature in respect of the short form scale.

### ***Psychometric properties of the short form of the MPI extraversion scale***

McGuire, Mowbray and Vallance (1963) investigated the value of the Maudsley Personality Inventory as a diagnostic tool in psychiatry. The test was administered to unselected groups of inpatients in the psychiatric wards of the Southern General Hospital, Glasgow, on several occasions over a period of six weeks. Not only did they evaluate the full Maudsley Personality Inventory but they also assessed the short form of the Maudsley Personality Inventory. Eysenck's (1958) high correlations were confirmed.

McGuire, Mowbray and Vallance (1963) also found that the average extraversion scores on the short extraversion scale fit the Eysenckian hypothesis better than the full extraversion scores for dysthymics. Schizophrenics appear as low scorers while at the more extraverted end of the group are the organics, character neurosis, manics and hysterics, all as predicted. The difference between hysterics and dysthymics for the short extraversion scale still does not reach statistical significance. The authors conclude that the first 6 extraversion questions may be more valid measures of extraversion than later questions.

Shaw and Hare (1965) have used the short form of the Maudsley Personality Inventory in a survey in two districts in Croydon. A total of 1,857 adults were interviewed. In addition the questionnaire was re-administered to a random 1 in 8 of the sample families making a total of 239 adults. The interviewer who asked the questions and recorded the answers administered the Maudsley Personality Inventory. The results show through the product-moment correlation coefficient extraversion and neuroticism are largely independent of each other in normal populations with a correlation of  $-.02$ .

Test-retest reliability shows that the mean scores are identical on retest. There is, however, a considerable difference in test-retest correlation coefficients for extraversion scores between the sexes. The male coefficient is  $.47$ , female coefficient is  $.69$  and the combined sample has an alpha coefficient of  $.60$ . The chance of gaining the same scores on retest for the male sample is therefore not very high.

Jalota (1965) administered a Punjabi version of the Maudsley Personality Inventory to 75 male and 75 female students at the Punjabi University, Chandigarh. The results show a mean extraversion score of  $8.2$ , compared with  $8.0$  for the English standard group.

### ***Applying the short form MPI extraversion scale***

The short form of the Maudsley Personality Inventory has been used, for example, to investigate the relationship between personality and job incentive (Rim, 1961) personality and risk (Rim, 1964) and personality and gender differences (Shaw & Hare,

1965).

Rim (1961) administered the short form of the Maudsley Personality Inventory to 348 students, (323 men and 25 women) in order to assess the relationship between personality and the dimensions of job incentive. The results showed no correlation between the scores of the 'need for achievement' or of the 'fear of failure' and extraversion.

Rim (1964) administered the short form of the Maudsley Personality Inventory to 80 subjects (40 men and 40 women) in order to investigate group decisions which involve risk. The results showed that high and low scoring extraverts change relatively little in their decisions involving risk after group discussions.

Shaw and Hare (1965) have used the short form of the Maudsley Personality Inventory in a survey in two districts in Croydon. A total of 1,857 adults were interviewed. In addition the questionnaire was re-administered to a random 1 in 8 of the sample families making a total of 239 adults. The interviewer who asked the questions and recorded the answers administered the Maudsley Personality Inventory. The results of this study, point in the same general direction as Eysenck's study (1958) with men scoring more highly on the extraversion scale.

## **Eysenck Personality Inventory**

### ***Developing the extraversion scale of the EPI***

The Eysenck Personality Inventory (EPI, Eysenck & Eysenck, 1964) is the third of the

Eysenck personality scales and is a development of the Maudsley Personality Inventory. Like the Maudsley Personality Inventory the Eysenck Personality Inventory, sets out to measure two major dimensions of personality, extraversion and neuroticism. The Eysenck Personality Inventory is made up of two Forms, Form A and Form B which contain in total 108 items. When reviewing the development of the Eysenck Personality Inventory and the subsequent research undertaken using the Eysenck Personality Inventory it became apparent that it is the Eysenck Personality Inventory Form A which has been the most widely used of the two forms and so the emphasis in this sub-section will be on the Eysenck Personality Inventory Form A.

According to the *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) the improvements that have been incorporated into the Eysenck Personality Inventory make the Eysenck Personality Inventory more useful from many practical points of view, including the following factors. The Eysenck Personality Inventory consists of two parallel forms, thus making possible retesting after experimental treatment without interference from memory factors. The items in the Eysenck Personality Inventory have been carefully reworded, to make them understandable by subjects of low intelligence and education. The Maudsley Personality Inventory items were found to be rather too difficult with subjects of this type. The correlation between extraversion and neuroticism on the Maudsley Personality Inventory was small but nonetheless in Eysenck's words marginally significant; suitable item selection has caused it to disappear in the Eysenck Personality Inventory. The Eysenck Personality Inventory contains a lie scale, which may be used to eliminate subjects showing 'desirability

response set'; no such scale was contained in the published form of the Maudsley Personality Inventory.

The test-retest reliability of the Eysenck Personality Inventory is somewhat higher than that of the Maudsley Personality Inventory; even after periods of several months it is still in excess of .85. Direct evidence is available of the validity of the Eysenck Personality Inventory as a descriptive instrument of the behaviour manifestations of personality.

Eysenck and Eysenck (1964) in developing the Eysenck Personality Inventory choose questions based on previous factor analysis of the Maudsley Personality Inventory and undertook a further twelve factor analytic studies. This resulted in a matrix of 128<sup>2</sup> entries, which included all items in Form A and Form B, as well as a set of substitute items. The subjects of these investigations included university students, various working and middle-class groups, varying in age and sex. Administration of the questionnaire was undertaken in two ways. In some studies subjects filled in forms whilst in others they answered questions put by interviewers (Eysenck, 1960; Eysenck & Eysenck, 1962). The total number of subjects involved were 30,000. The results showed the retest reliabilities to be quite satisfactory, running between .84 and .94 for the complete test and between .80 and .97 for the separate forms. The split-half reliabilities for the combined scales run from .85 to .95; for the separate scales they run from .74 to .91.

In answering Carrigan's (1960) criticism, about the correlation between extraversion and introversion on the Maudsley Personality Inventory, Eysenck found that the correlations

between extraversion and neuroticism reflect the choice of questions. If more questions are taken from the 'melancholic' quadrant, then extraversion and neuroticism show a negative correlation, whereas a bias in favour of questions from the 'choleric' quadrant will result in a positive correlation between extraversion and neuroticism. The Maudsley Personality Inventory showed a bias, and an attempt was made to correct this imbalance by selecting equal numbers of questions from both quadrants. The results show that the correlation between extraversion and neuroticism is  $-.062$  in the normal group, and  $-.091$  and  $-.090$  in the neurotic and psychotic groups respectively. According to Eysenck and Eysenck (1964) these values are near enough to zero to make the scales for all practical purposes independent.

Eysenck and Eysenck (1964) in their introduction to the *Manual of the Eysenck Personality Inventory* claim that the Eysenck Personality Inventory is 'sufficiently similar to the Maudsley Personality Inventory, and correlates sufficiently highly with it, to make it almost certain that the experimental findings reported for the older instrument will also apply to the newer scale.' The new scale Form A, however, has only four questions from the Maudsley Personality Inventory and all four have been reworded. The questions are as follows:

- Can you usually let yourself go and enjoy yourself a lot at a gay party? / Can you usually let yourself go and have a hilariously good time at a gay party? (MPI)
- Do other people think of you as being very lively? / Do other people regard you as a lively individual? (MPI)

- Do you like the kind of work that you need to pay close attention to? / Do you like work that requires considerable attention to detail? (MPI)
- Do you like playing pranks on others? / Do you like to play pranks upon others? (MPI)

### ***Extraversion scale items in the EPI***

In the Eysenck Personality Inventory Form A extraversion was assessed by the following 24 items:

- Do you often long for excitement?
- Are you usually carefree?
- Do you stop and think things over before doing anything?
- Do you generally do and say things quickly without stopping to think?
- Would you do almost anything for a dare?
- Do you often do things on the spur of the moment?
- Generally to you prefer reading to meeting people?
- Do you like going out a lot?
- Do you prefer to have few but special friends?
- When people shout at you, do you shout back?
- Can you usually let yourself go and enjoy yourself a lot at a gay party?
- Do other people think of you as being very lively?
- Are you mostly quiet when you are with other people?
- If there is something you want to know about, would you rather look it up in a book than talk to someone about it?

- Do you like the kind of work that you need to pay close attention to?
- Do you hate being with a crowd who play jokes on one another?
- Do you like doing things in which you have to act quickly?
- Are you slow and unhurried in the way you move?
- Do you like talking to people so much that you never miss a chance of talking to a stranger?
- Would you be very unhappy if you could not see lots of people most of the time?
- Would you say that you were fairly self-confident?
- Do you find it really hard to enjoy yourself at a lively party?
- Can you easily get some life into a rather dull party?
- Do you like playing pranks on others?

### ***Defining extraversion in the EPI***

The *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) describes a 'typical' extravert as:

Sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He craves excitement, takes chances often sticks his neck out, eats on the spur of the moment, and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer and generally likes change; he is carefree, easy-going, optimistic, and likes to 'laugh and be merry'. He prefers to keep on moving and doing things, tends to be aggressive and lose his temper quickly; altogether his feelings are not under control, and he is not always a reliable person.

The *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) describes a 'typical' introvert as:

a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, 'looks before he leaps' and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness and likes a well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner and does not lose his temper easily. He is reliable somewhat pessimistic and places great value on ethical standards.

***Psychometric properties of the EPI extraversion scale***

The *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) reports two ways of assessing the reliability of the Eysenck Personality Inventory, repeat reliability (test-retest) and split-half reliability.

Table 3.2 test-retest result from Eysenck and Eysenck (1964).

	Number	E <sup>A</sup>	E <sup>B</sup>	E
Group X	92	0.82	0.85	0.88
Group Y	27	0.97	0.80	0.94

Eysenck and Eysenck (1964) using the test-retest method studied two groups of normal subjects. He called them group X and group Y. The time that elapsed between the testing was a year for X and nine months for Y. The results are set out in table 3.2. The reliabilities of the two forms are given separately and a final figure combining the two can be seen in table 3.2 (the superscript 'A' and 'B' refer to the two forms of each scale; when 'E' is given without the superscript it refers to the combined forms). According to Eysenck & Eysenck (1964) these results are encouragingly high considering the time that

elapsed between test and retest.

The split-half reliabilities for Form A vs Form B, for 1,655 normals, 210 neurotics and 90 psychotics were obtained by using the Spearman-Brown prophecy formula. The results are set out in table 3.3. In the light of these results the authors suggest that if individual decisions are to be made on the basis of the inventory, both forms should be used; for experimental studies one form alone may be sufficient.

Table 3.3 Split-half reliabilities from Eysenck and Eysenck (1964).

	Normals	Neurotics	Psychotics
$E^A$ vs $E^B$	0.757	0.750	0.741
	(0.862)	(0.857)	(0.851) Forms A&B

White, Stephenson, Child and Gibbs (1968) validated the extraversion scale of the Eysenck Personality Inventory in three separate investigations. In the first investigation, the extraversion scores of the Eysenck Personality Inventory were obtained from five groups of psychology students. These students were then asked to rate each other on extraversion, using the method of paired comparisons. In the second investigation, the social behaviour of two extreme groups of scorers on the Eysenck Personality Inventory were compared. In the third investigation two extreme scoring groups of female students were compared by means of questionnaires measuring rule-breaking and strength of conscience.

The results show in the first study that, when the extraversion scores on the Eysenck Personality Inventory were compared with the students' own ranking, two of the five correlations were significant. In the second study, two groups of male students scoring at extreme ends of the extraversion scale were interviewed about their everyday activities. Although most of the differences between the groups lay in the direction predicted, only three reached significance, namely number of dances attended, number of parties attended and number of parties gate crashed. In the third study the results showed that extraverts reported having broken more rules more frequently than introverts and expressed more permissive attitudes toward rule-breaking, thus providing evidence for the construct validity of the Eysenck Personality Inventory.

Mowbray and Davies (1968) administered the Eysenck Personality Inventory to 2,962 Australian medical students although after excluding inadequate returns the number in the sample fell to 2,363. The results showed that there is an increase in extraversion scores from first to second year of study which was significant ( $p < .001$ ). There were no significant differences, however, between the male and female students on the extraversion scale.

When Mowbray and Davies (1968) compared the Australian students with the British students cited in the *Manual of the Eysenck Personality Inventory* (Eysenck & Eysenck, 1964) they found that the Australian medical students were significantly younger and obtained significantly lower mean extraversion scores ( $p < .001$ ).

### ***Applying the EPI extraversion scale***

The Eysenck Personality Inventory Form A has been used, for example to assess the relationship between personality and success (Gibbins & Savage, 1965; Farley, 1966b; Kline, 1966); personality and social conditioning (Farley, 1966a); the personality patterns of businessmen (Eysenck, 1967); personality and endurance (Farley, 1968); personality and attitude towards capital punishment (McKelvie & Daoussis, 1982) and attitude towards religion (Robinson, 1990).

Gibbins and Savage (1965) used the Eysenck Personality Inventory Form A among 60 students at a teaching training institution to assess intelligence, study habits and personality factors in academic success. They found a correlation between extraversion and academic failure of .299 ( $p < .05$ ) this supports other findings linking significant positive relationships between introversion and academic success. Gibbins and Savage (1965) also found that the mean extraversion scores for this teacher training college were significantly higher ( $p < .05$ ) than those presented for teachers in the original normative data on the Eysenck Personality Inventory.

Farley (1966b) used the extraversion scale of the Eysenck Personality Inventory and the achievement scale of the Edwards Personal Preference Schedule (Edwards, 1959) in order to assess the relationship between introversion and achievement motivation. The scales were administered to 66 male trade apprentices at a large British motor works training school. The results show a Pearson correlation between the two scales of  $-.21$

( $p < .05$ ). Although the result is significant and in the predicted direction the correlation is low.

Kline (1966) investigated the relationship between academic performance and extraversion and neuroticism among Ghanaian students. He administered the Eysenck Personality Inventory Form A to 110 Ghanaian students at the University College of Science Education, Cape Coast. The results showed that introversion is significantly related academic performance ( $p < .01$  level).

Farley (1966a) used the Eysenck Personality Inventory Form A to confirm his hypothesis that introverts socially condition more strongly than extraverts and should therefore emit more socially desirable responses than extraverts. The sample consisted of 32 paid volunteers taking part in a number of experiments at the Institute of Psychiatry, University of London. The scales used were the Eysenck Personality Inventory Form A, Edwards 39-item social desirability scale (Edwards, 1957) and the Marlowe-Crowne 33-item Social Desirability Scale (Crowne & Marlowe, 1960). The results show that extraversion was significantly negatively associated with social desirability responding when using the Marlowe-Crowne Social Desirability scale  $-.21$  ( $p < .05$ ) but there was no significant correlation between extraversion and the Edward's social desirability scale.

Eysenck (1967) used the Eysenck Personality Inventory Form A to investigate the personality patterns of businessmen. A total of 1,504 businessmen were asked to complete the Eysenck Personality Inventory Form A and to tick one of 7 categories,

delineating the following different types of jobs: general management, research and development technology, personnel, finance, production, sales, consultancy and more than one of the above. The results showed that the business groups are relatively introverted, with finance, research and development consultants being the most introverted groups. Those who ticked more than one group were the most extraverted. Successful businessmen are on the whole stable introverts.

Farley (1968) administered the Eysenck Personality Inventory Form A and the need endurance (n – end) subscale of the Edwards Personal Preference Schedule (Edwards, 1959) to a group of 66 male British trade apprentices in order to discover the relationship between extraversion and the self-description of endurance. The results yield a significantly negative correlation coefficient ( $p < .05$ ). This finding establishes that extraverts tend to rate themselves low in endurance.

To check on the reliability of these data, a second group of 56 male British trade apprentices were tested on the Eysenck Personality Inventory Form A and the n-end measure the resulting correlation coefficient based on this group was  $-.415$ , which was clearly significant beyond the 1% point and confirms the previous finding.

McKelvie and Daoussis (1982) administered the Eysenck Personality Inventory Form A to a sample of 89 Canadian students to assess personality and attitude towards capital punishment. The results showed that extraverts report a stronger belief in capital

punishment than introverts supporting Eysenck's contention that the social attitude dimension of tough-mindedness reflects the personality dimension of extraversion.

Robinson (1990) investigated the relationship between Eysenck's personality measures and religious orientation. He administered the Eysenck Personality Inventory Form A and the Religious Orientation Inventory (ROI, Allport & Ross, 1967) to 194 introductory Psychology students. The results showed that there was a significant correlation between extraversion and the Religious Orientation Inventory variables ( $p < .05$ ).

## **Eysenck Personality Questionnaire**

### ***Developing the extraversion scale of the EPQ***

The Eysenck Personality Questionnaire was the fourth personality scale to be constructed and was developed from the Eysenck Personality Inventory. It differs from the Eysenck Personality Inventory in having an additional dimension labelled psychoticism. The authors, Eysenck and Eysenck (1975) claim in the *Manual of the Eysenck Personality Questionnaire* that the extraversion and neuroticism scales in the old and new questionnaires are psychometrically equivalent and that any validation data collected with regard to the original scales could therefore 'be assumed to apply with equal force to the new scales' (Eysenck & Eysenck, 1975).

Helmes (1980), however, noted that only 25 of the 57 extraversion, neuroticism and lie items on the Eysenck Personality Inventory were used in the Eysenck Personality

Questionnaire, (8 extraversion items, 4 lie scale items, 13 neuroticism items) and that 8 of the 25 common items had been reworded.

The identical items included in the extraversion scale of the Eysenck Personality Questionnaire from the extraversion scale of the Eysenck Personality Inventory are:

- Do you like going out a lot?
- Are you mostly quiet when you are with other people?
- Can you easily get some life into a rather dull party?
- Do you like doing things in which you have to act quickly?
- Do other people think of you as being very lively?

The reworded items in the Eysenck Personality Questionnaire are:

- Can you usually let yourself go and enjoy yourself at a lively party? / Can you usually let yourself go and enjoy yourself at a gay party? (EPI)
- Do you prefer reading to meeting people? / Generally do you prefer reading to meeting people? (EPI)

There are other questions with similar meaning but very different wording and this may account for the discrepancy between Helmes (1980) and my own analysis. Helmes suggests that 8 extraversion questions are used in the Eysenck Personality Questionnaire from the Eysenck Personality Inventory whereas my research maintains 7 have been used.

Rocklin and Revelle (1981) using a large sample of subjects administered both the Eysenck Personality Inventory and the Eysenck Personality Questionnaire to assess the difference between extraversion proposed in the Eysenck Personality Inventory and extraversion as proposed in the Eysenck Personality Questionnaire. They found a significant difference between the two extraversion scales, while a factor analysis of the Eysenck Personality Inventory extraversion items resulted in two major factors labelled sociability and impulsivity, the Eysenck Personality Questionnaire extraversion revealed a single factor unequivocally measuring sociability alone.

This distinction between impulsivity and sociability was reported as early as 1960 by Carrigan (1960) and appears as a criticism of the Maudsley Personality Inventory (Eysenck, 1959). Guilford (1975) has also argued that the measurement of extraversion by means of the Eysenck Personality Inventory scale represents a 'shotgun wedding' of two empirically discriminable constructs. Exploring this issue further, Campbell and Reynolds (1984) compared factor scores on the Eysenck Personality Inventory and Eysenck Personality Questionnaire with those obtained on the Guilford-Zimmerman Temperament Survey (GZTS – Guilford, Zimmerman & Guilford, 1976). The GZTS locates the first-order factors of sociability, ascendance and general activity together on a second-order factor labelled social activity (SA), whereas the two first-order factors associated with impulsivity (restraint and thoughtfulness) are grouped on a separate second-order factor labelled introversion-extraversion (IE). They found that while the Eysenck Personality Inventory extraversion scale was associated with both SA and IE on the GZTS, the Eysenck Personality Questionnaire extraversion was related only to SA.

Roger and Morris (1991) extracted two factors from the Eysenck Personality Questionnaire extraversion scale in their study on the internal structure of the Eysenck Personality Questionnaire scales, liveliness and sociability. There was substantial overlap between the factors, four items appeared on both factors, and several other factors nearly did so. The one Eysenck Personality Questionnaire extraversion item which refers explicitly to impulsiveness, item 60, 'Do you like doing things in which you have to act quickly?' failed to load on either factor, and a separate three-factor extraction also gave no evidence of an impulsivity factor.

Roger and Morris (1991) suggest that 'simply dividing Eysenck Personality Inventory extraversion into impulsivity and sociability to distinguish the components has the effect of narrowing significantly the range of behaviour sampled by each subscale.'

Although Eysenck and Eysenck (1975) claim that the extraversion scale in the Eysenck Personality Questionnaire is psychometrically equivalent to the Eysenck Personality Inventory it can be seen that the impulsivity items have migrated to the psychoticism scale (Roger & Morris, 1991).

### ***Extraversion scale items in the EPQ***

In the Eysenck Personality Questionnaire extraversion was assessed by the following 21 items:

- Do you have many different hobbies?

- Are you a talkative person?
- Are you rather lively?
- Can you usually let yourself go and enjoy yourself at a lively party?
- Do you enjoy meeting new people?
- Do you tend to keep in the background on social occasions?
- Do you like going out a lot?
- Do you prefer reading to meeting people?
- Do you have many friends?
- Would you call yourself happy-go-lucky?
- Do you usually take the initiative in making new friends?
- Are you mostly quiet when you are with other people?
- Can you easily get some life into a rather dull party?
- Do you like telling jokes and funny stories to your friends?
- Do you like mixing with people?
- Do you nearly always have a 'ready answer' when people talk to you?
- Do you like doing things in which you have to act quickly?
- Do you often take on more activities than you have time for?
- Can you get a party going?
- Do you like plenty of bustle and excitement around you?
- Do other people think of you as being very lively?

### ***Defining extraversion in the EPQ***

*The Manual of the Eysenck Personality Questionnaire* (Eysenck & Eysenck, 1975)

describes a 'typical' extravert as:

Sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by himself. He craves excitement, takes chances often sticks his neck out, eats on the spur of the moment, and is generally an impulsive individual. He is fond of practical jokes, always has a ready answer and generally likes change; he is carefree, easy-going, optimistic, and likes to 'laugh and be merry'. He prefers to keep on moving and doing things, tends to be aggressive and loses his temper quickly; altogether his feelings are not under control, and he is not always a reliable person.

The *Manual of the Eysenck Personality Questionnaire* (Eysenck & Eysenck, 1975)

describes a 'typical' introvert as:

a quiet, retiring sort of person, introspective, fond of books rather than people; he is reserved and distant except to intimate friends. He tends to plan ahead, 'looks before he leaps' and distrusts the impulse of the moment. He does not like excitement, takes matters of everyday life with proper seriousness and likes a well-ordered mode of life. He keeps his feelings under close control, seldom behaves in an aggressive manner and does not lose his temper easily. He is reliable somewhat pessimistic and places great value on ethical standards.

### ***Psychometric properties of the EPQ extraversion scale***

Loo (1979) administered the Eysenck Personality Questionnaire to 139 females and 123 males in order to investigate the psychometric properties of the Eysenck Personality Questionnaire. The results show that the reliabilities for the extraversion scale are in line with those reported in the manual. The results for the extraversion scale are set out in table 3.4.

Francis, Brown and Philipchalk (1992) administered the Eysenck Personality Questionnaire to 685 undergraduate students from England, Canada, the USA and Australia. The results showed an alpha coefficient of .85 for the English sample, .88 for

the Canadian sample, .84 for the American sample and .82 for the Australian sample.

Table 3.4 Mean scores, standard deviation and reliability scores from Loo (1979)

Sample	Number	M	SD	Reliability
Females	139	14.06	4.34	.82
Males	123	13.58	4.36	.82
Total	262	13.83	4.34	.82

Rocklin and Revelle (1981) compare the Eysenck Personality Inventory with the Eysenck Personality Questionnaire in order to verify the authors' claim that the two tests were 'equivalent.'

Using the results of 838 college students Rocklin & Revelle correlated the Eysenck Personality Inventory and the Eysenck Personality Questionnaire scales. Their results show that the extraversion scales of the Eysenck Personality Inventory and the Eysenck Personality Questionnaire differ. For example, the impulsivity subscale from the Eysenck Personality Inventory is no longer closely related to the Eysenck Personality Questionnaire extraversion subscale. Whatever relationship there is between the Eysenck Personality Questionnaire extraversion scale and impulsivity as measured on the Eysenck Personality Inventory is due to the inherent correlation between impulsivity and sociability.

Examination of the internal structure of the two scales shows that the Eysenck Personality Inventory scale is not unidimensional and two of the factors can be identified as sociability and impulsivity, whilst the Eysenck Personality Questionnaire scale is unidimensional and this factor is sociability. Rocklin and Revelle (1981) argue that it is not surprising that the Eysenck Personality Questionnaire extraversion is a sociability scale when only one of the 9 impulsivity items on the Eysenck Personality Inventory appear on the extraversion scale and of the 13 sociability items on the Eysenck Personality Inventory only six appear on the Eysenck Personality Questionnaire's extraversion scale.

Rocklin and Revelle's (1981) results suggests that in an attempt to 'purify' the extraversion scale, Eysenck and Eysenck have replaced impulsivity items with sociability items and have therefore changed its structure so that it is no longer an adequate measure of their theoretical construct.

### ***Applying the EPQ extraversion scale***

As the Eysenck Personality Questionnaire developed it has been used, for example, in its PEN version to assess the relationship between personality age, sex and social class (Eysenck & Eysenck, 1969) and personality and transcendental meditation (Williams, Francis & Durham, 1976), and in its later Eysenck Personality Questionnaire form, for example, to assess the relationship between personality and assertiveness and aggressiveness (Hernandez & Mauger, 1980), personality and poverty (Rim, 1984),

personality and drug addiction (Gossop & Eysenck, 1983) and personality and religion (Caird, 1987).

Eysenck and Eysenck (1969) used their PEN Inventory (H. J. Eysenck & S. B. G. Eysenck, 1968, S. B. G. Eysenck & H. J. Eysenck, 1968) to assess the relationship between the three personality variables and age, sex and social class. The inventory containing 20 extraversion, 20 neuroticism and 20 psychoticism questions was administered to 1,423 adult males and 968 females as well as to 1,400 students of both sexes and to 327 housewives. Analysis by age, sex and social class showed that young people are high on extraversion, that males are high on extraversion and that middle class people are low on extraversion.

Williams, Francis and Durham (1976) administered the PEN Inventory to a group of people undertaking transcendental meditation. The results showed that male meditators (n = 39) were more introverted than the normal population.

Hernandez and Mauger (1980) used the Eysenck Personality Questionnaire to assess the relationship between assertiveness, aggressiveness and personality. Assertiveness and aggressiveness were measured by the Interpersonal Behaviour Survey (IBS, Mauger, Adkinson, Hernandez, Hook & Firestone, 1978). Two samples were used. Sample one consisted of 12 psychiatric inpatients, 67 college students and 69 state prison inmates. Sample two consisted of 50 psychiatric patients. The results showed a significant positive correlation between extraversion and assertiveness.

Rim (1984) used the Eysenck Personality Questionnaire to explain poverty from a personality aspect. A total of 137 subjects aged between 18 and 36 were asked to rate on a 7-point scale the importance of 15 explanations of poverty: four were individualistic explanations; seven were social explanations and four were fatalistic explanations. The results show that subjects with low extraversion scores give more individualistic explanations and high extraversion scorers more social explanations for poverty.

Gossop and Eysenck (1983) compared the personality of drug addicts in treatment with that of a prison population. A total of 1,226 subjects took part in the study, 221 made up the drug-dependant sample and 934 males and 71 females made up the prison population. The results showed that prisoners returned higher extraversion scores than the drug addicts.

Caird (1987) administered Hood's Mystical Experience Scale (Hood, 1975) and the Eysenck Personality Questionnaire to 115 students enrolled in first-year Religious Studies at the University of Queensland. The results do not offer any support that mystical experience is linked with extraversion.

## **The Revised Eysenck Personality Questionnaire**

### ***Developing the extraversion scale of the EPQR***

After publishing the Eysenck Personality Questionnaire there appeared a number of criticisms of the psychometric properties of the psychoticism scale (Block, 1977a; Block,

1977b; Bishop, 1977). The three major faults included the low reliability of the scale, the low range of scoring and the skewed distribution scores. In an attempt to improve the psychoticism scale Eysenck, Eysenck and Barrett (1985) attempted to increase the internal reliability of the scale, improve the shape of distribution and increase the mean and variance score.

Two different studies were conducted. The first study (A) used a 90 item questionnaire which contained the Eysenck Personality Questionnaire psychoticism scale plus new items together with 12 extraversion and 13 neuroticism items selected from the Eysenck Personality Questionnaire. The sample tested consisted of a randomly selected group of 384 men and 290 women. The second sample (B) used a 117 item questionnaire which contained all the 90 items of the Eysenck Personality Questionnaire plus almost all the possible new psychoticism items used in the questionnaire of study A. The sample consisted of 408 men and 494 women which included students and teachers and others who were willing to complete the questionnaire.

There are two new extraversion items included in the Revised Eysenck Personality Questionnaire:

- Have people said that you sometimes act too rashly?
- Do you often make decisions on the spur of the moment?

### ***Extraversion Scale Items in the EPQR***

- Do you have many different hobbies?

- Are you a talkative person?
- Are you rather lively?
- Can you usually let yourself go and enjoy yourself at a lively party?
- Do you enjoy meeting new people?
- Do you tend to keep in the background on social occasions?
- Do you like going out a lot?
- Do you prefer reading to meeting people?
- Do you have many friends?
- Would you call yourself happy-go-lucky?
- Do you usually take the initiative in making new friends?
- Are you mostly quiet when you are with other people?
- Can you easily get some life into a rather dull party?
- Do you like telling jokes and funny stories to your friends?
- Do you like mixing with people?
- Have people said that you sometimes act too rashly?
- Do you nearly always have a 'ready answer' when people talk to you?
- Do you like doing things in which you have to act quickly?
- Do you often make decisions on the spur of the moment?
- Do you often take on more activities than you have time for?
- Can you get a party going?
- Do you like plenty of bustle and excitement around you?
- Do other people think of you as being very lively?

## ***Defining extraversion in the EPQR***

The *Manual of the Eysenck Personality Scales* (Eysenck & Eysenck, 1991) states that the typical high extraversion scorer is described as:

sociable, likes parties, has many friends, needs to have people to talk to, and does not like reading or studying by themselves. They crave excitement, take chances, often stick their neck out, act on the spur of the moment, and is generally an impulsive individual. The high extraversion scorer is fond of practical jokes, always has a ready answer, and generally likes change. They are carefree, easygoing, optimistic, and like to 'laugh and be merry.' They prefer to keep moving and doing things, they tend to be aggressive and loose their temper quickly; altogether their feelings are not kept under tight control, and they are not always reliable people.

The typical introvert is:

a quiet, retiring sort of person, introspective, fond of books rather than people; they are reserved and distant except to intimate friends. They tend to plan ahead, 'looks before leaping' and distrusts the impulse of the moment. They do not like excitement, takes matters of everyday life with proper seriousness, and likes a well-ordered mode of life. They keep their feelings under close control, seldom behave in an aggressive manner, and does not lose his temper easily. They are reliable, somewhat pessimistic, and places great value on ethical standards.

## ***Psychometric properties of the EPQR extraversion scale***

San-Martini and Mazzotti (1990) administered an Italian version of the Revised Eysenck Personality Questionnaire to 306 undergraduate students. The results show a mean score of 14.0, a standard deviation of 4.6 and an alpha coefficient of .82. The extraversion scale shows a similar internal reliability as the older scales.

Wilson and Doolabh (1992) evaluated the internal consistency of the Revised Eysenck Personality Questionnaire among 670 black Zimbabwean students. The alpha coefficient on the extraversion scale was .72 for the men and .73 for the women.

Eysenck, Barrett and Barnes (1993) administered the Revised Eysenck Personality Questionnaire to 615 male and 642 female Canadians. The results showed an alpha coefficient of .84 for the men and .82 for the women on the extraversion scale.

Lewis and Maltby (1996) administered the Revised Eysenck Personality Questionnaire to 100 male students. Cronbach's alpha coefficient was .81.

San-Martini, Mazzoti and Setaro (1996) administered an Italian version of the Revised Eysenck Personality Questionnaire to 553 subjects. The results are similar to the older version, Cronbach's alpha coefficient for males was .82 and .81 for females on the extraversion scale.

Strelau and Zawadzki (1997) administered a Polish version of the Revised Eysenck Personality Questionnaire (Drwal, 1995) to 1,817 people. The results showed an alpha coefficient of .86 for the extraversion scale, which reveals a slightly higher internal reliability than the extraversion scale of the Eysenck Personality Questionnaire.

Ortet, Ibanez, Moro, Silva and Boyle (1999) administered a Spanish version of the Revised Eysenck Personality Questionnaire to 527 men and 583 women to assess the psychometric properties of Eysenck's revised psychoticism scale cross-culturally. The alpha coefficient for the men was .82 and .80 for the women. Test-retest reliability using a sample of 159 subjects was .86 which indicates that the extraversion scale is highly reliable and stable.

### *Applying the EPQR extraversion scale*

The Revised Eysenck Personality Questionnaire has been used, for example, to assess the relationship between personality and religion (Heaven, 1990); personality and drug addiction (Lodi & Thakur, 1993) and personality and completion of questionnaires (Merten & Ruch, 1996).

Heaven (1990) administered the Revised Eysenck Personality Questionnaire and the Value Survey (Braithwaite & Law, 1985) to 185 Australian Adolescents. The results showed that extraversion correlated significantly ( $p < .05$ ) with religious commitment among the female group.

Lodi and Thakur (1993) administered the Revised Eysenck Personality Questionnaire in Marathi to a sample of 58 male crude-heroin ('brown sugar') addicts and a comparison group of 58 male non-addicts. The results showed that the addicts scored lower on the extraversion scale than the comparison group.

Merten and Ruch (1996) administered the German version of the Revised Eysenck Personality Questionnaire and Carroll's Rating Scale of Depression both conventionally in the written form and in computerised form, in order to compare the results. They found no differences between the two modes of application.

### **Eysenck Personality Questionnaire Revised: short form**

### ***Developing the extraversion scale of the EPQR-short form***

Having produced the 100 item Revised Eysenck Personality Questionnaire to improve the psychometric properties of the psychoticism scale the authors thought it desirable to devise a short scale of the Revised Eysenck Personality Questionnaire for use when time is limited. Twelve items were chosen from each of the scales. The extraversion scale has an alpha coefficient of .88 for males and .84 for females.

### ***Extraversion scale items in the EPQR-short form***

In the short form of the Revised Eysenck Personality Questionnaire extraversion was assessed by the following 12 items:

- Are you a talkative person?
- Are you rather lively?
- Do you enjoy meeting new people?
- Can you let yourself go and enjoy yourself at a lively party?
- Do you usually take the initiative in making new friends?
- Can you easily get some life into a rather dull party?
- Do you tend to keep in the background on social occasions?
- Do you like mixing with people?
- Do you like plenty of bustle and excitement around you?
- Are you mostly quiet when you are with other people?
- Do other people think of you as being rather lively?
- Can you get a party going?

### ***Defining extraversion in the EPQR-short form***

Since the short form of the Revised Eysenck Personality Questionnaire is explicitly derived from the parent edition of the Revised Eysenck Personality Questionnaire no separate definition of extraversion has been provided in the literature in respect of the short form scale.

### ***Psychometric properties of the extraversion scale in the EPQR-short form***

Francis and Pearson (1988) administered the short form of the Revised Eysenck Personality Questionnaire to 181, 15 and 16 year olds. The results showed a Cronbach alpha coefficient of .8481 for the extraversion scale.

Francis, Brown and Philipchalk (1992) administered the Eysenck Personality Questionnaire and the short form of the Revised Eysenck Personality Questionnaire to 685 undergraduate students from England, Canada, the USA and Australia. The results showed an alpha coefficient of .85 for the English sample, .87 for the Canadian sample, .83 for the American sample and .78 for the Australian sample.

Wilson and Doolabh (1992) evaluated the internal consistency of the short form of the Revised Eysenck Personality Questionnaire among 670 black Zimbabwean students. The results showed an alpha coefficient of .67 for the males and .67 for the females.

### ***Applying extraversion scale of the EPQR-short form***

The short form of the Revised Eysenck Personality Questionnaire has been used to assess the relationship between personality and error (Pearson, 1989) and personality and behavioural disability (Pearson, 1990a).

Pearson (1989) administered the short form of the revised Eysenck Personality Questionnaire and the Gibson spiral maze test of the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gelleard, 1979) to 46 psychogeriatric patients. The results showed no significant relationship between extraversion and the error score.

Pearson (1990a) administered the short form of the revised Eysenck Personality Questionnaire and the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gilleard, 1979) to 32 psychogeriatric patients suffering from depression and anxiety and 34 psychgeriatric patients diagnosed as suffering from dementia. No relationship was found between personality and behavioural disability.

## **Eysenck Personality Questionnaire Revised: abbreviated form**

### ***Developing the extraversion scale of the EPQR-A***

The abbreviated form of the Revised Eysenck Personality Questionnaire was developed by Francis, Brown and Philipchalk (1992) because it was felt that the short form of the Revised Eysenck Personality Questionnaire was still too long. In developing the abbreviated form the authors used data from England, Canada, the USA and Australia and the total sample consisted of 685 undergraduate students. They administered both the Eysenck Personality Questionnaire and the short form of the Revised Eysenck

Personality Questionnaire to 59 men and 153 women in England, 57 men and 92 women in Canada, 51 men and 81 women in the USA and 52 men and 139 women in Australia. The results on the extraversion scale recorded alpha coefficients of .82 for the English sample, .83 for the Canadian sample, .80, for the American sample and .73 for the Australian sample. On the basis of these results the authors suggest that the reliability and validity of the 6-item scales of the abbreviated form of the Revised Eysenck Personality Questionnaire can be recommended as a functional equivalent to the short form of the Revised Eysenck Personality Questionnaire.

### ***Extraversion scale items in the EPQR-A***

In the abbreviated form of the Revised Eysenck Personality Questionnaire extraversion was assessed by the following 6 items:

- Are you a talkative person?
- Are you rather lively?
- Can you easily get some life into a rather dull party?
- Do you tend to keep in the background on social occasions?
- Are you mostly quiet when you are with other people?
- Do other people think of you as being rather lively?

### ***Psychometric properties of the EPQR-A extraversion scale***

Maltby (1995b) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and asked 92 US female students about their frequency of church attendance and personal prayer in order to assess the relationship between personality and religion. The results showed an alpha coefficient of .75.

Lewis and Maltby (1996) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and two questions about religion, that is church attendance and frequency of prayer to 100 male students. The results showed an alpha coefficient on the extraversion scale of .81.

Maltby, Talley, Cooper and Leslie (1995) administered the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987), the age Universal I-E scale (Gorsuch & Venable, 1983) and the abbreviated form of the Revised Eysenck Personality Questionnaire. The results showed an alpha coefficient of .77 for extraversion.

Maltby (1999) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and an amended version of the age Universal I-E scale (Gorsuch & Venable, 1983) to two groups of students. The first sample comprised 213 students from England and the second sample comprised 172 students from Ireland. The results showed an alpha coefficient of .84 for the English sample and .82 for the Irish sample.

### ***Applying the EPQR-A extraversion scale***

The EPQR-A has been used to assess the relationship between personality and religion (Maltby, 1995b; Lewis and Maltby, 1996; Maltby, Talley, Cooper & Leslie, 1995; Maltby, 1999).

Maltby (1995b) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and asked 92 US female students about their frequency of church attendance and personal prayer in order to assess the relationship between personality and

religion. There was no significant relationship between extraversion and personal prayer and church attendance.

Lewis and Maltby (1996) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and two questions about religion, that is church attendance and frequency of prayer to 100 male students. The results showed no association between extraversion and frequency of prayer or church attendance.

Maltby, Talley, Cooper and Leslie (1995) administered the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987), the age Universal I-E scale (Gorsuch & Venable, 1983) and the abbreviated form of the Revised Eysenck Personality Questionnaire. The results showed no relationship between extraversion and religion.

Maltby (1999) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and an amended version of the age Universal I-E scale (Gorsuch & Venable, 1983) to two groups of students. The first sample comprised 213 students from England and the second sample comprised 172 students from Ireland. The results showed no significant relationship between extraversion and religion.

### ***Summary***

This chapter has set out the theory and development of the higher order factor of extraversion as proposed by Eysenck and his associates. The construct known as extraversion is understood initially in terms of sociability and the questions in the

Maudsley Personality Inventory reflect this. The understanding of extraversion given by Eysenck (1959) is one that sees a person who scores high on extraversion as opposed to introversion as one who is outgoing, uninhibited, and has social inclinations. The Maudsley Personality Inventory was the first of the Eysenckian personality scales to measure extraversion and as the scale developed into the Eysenck Personality Inventory few of the old items were included. Form A of the Eysenck Personality Inventory has only four questions from the Maudsley Personality Inventory and all four have been reworded. The new questions include items of sociability alongside items of impulsivity and aggression. The description given by Eysenck and Eysenck (1964) of a person scoring high on the extraversion scale also reflects this shift. They now describe the high scoring extravert as a person who is impulsive, carefree and aggressive.

The fourth scale developed by Eysenck and Eysenck (1975) is the Eysenck Personality Questionnaire. In the *Manual of the Eysenck Personality Questionnaire* (Eysenck & Eysenck, 1975) the authors claim that ‘the extraversion scale like the neuroticism scale in the old and the new questionnaires are psychometrically equivalent and that any validation data collected with regard to the original scales could therefore be assumed to apply with equal force to the new scales.’ This statement is difficult to believe when the Eysenck Personality Questionnaire only contains five items in their entirety from the Eysenck Personality Inventory and only contains two reworded items and 14 new items. The description given of a typical high scoring extravert in the *Manual of the Eysenck Personality Inventory* is almost identical to the description of the typical high scoring extravert in *The Manual of the Eysenck Personality Questionnaire* which agrees with the

theory that the same construct is being measured. Closer inspection reveals, however, that the impulsivity items have moved to the new psychoticism scale (Roger & Morris, 1991) and the scale is not measuring what it claims to be measuring.

The fifth scale Eysenck and his associates developed is the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck, & Barrett, 1985) and they have added two new items to the scale and so can claim that the same construct is being measured. The short form of the Revised Eysenck Personality Questionnaire reduces the number of items in the extraversion scale to 12 and the abbreviated form of the Revised Eysenck Personality Questionnaire (Francis, Brown and Philipchalk, 1992) reduces the scale to 6 items.

It is clear from this review that the higher order dimension of extraversion remains quite fluid in the different scales that Eysenck develops and there is a different balance of items in the different versions of the Eysenckian extraversion scales. Consequently different constructs of extraversion are being measured in the different scales. Two consequences emerge from this observation. First, it may not always be sensible to generalise findings derived from the application of one edition of the extraversion scale to all editions of the scale. Second, when significant correlations are established between extraversion and other variables it may not always be possible to understand or know which components of the higher order dimension of personality are in fact contributing to the relationship. There may be advantages, therefore, in employing an instrument which deliberately sets out to identify the component factors contributing to extraversion and to measure these factors separately. The Eysenck Personality Profiler is discussed in chapter six and sets

out the measurement of the different component parts of extraversion.

## **4 Psychoticism**

### **Overview**

This chapter will explore Eysenck's theory of psychoticism as it has developed through the various personality questionnaires he has constructed, beginning with Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and ending with the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991). The aim of this chapter is to investigate the construct known as psychoticism and to assess whether the understanding and measurement of the higher order dimension remains the same as it develops through the different scales proposed by Eysenck and his associates.

The chapter will be sub-divided chronologically by the name of the Questionnaire and each of the sub-divisions will look at the development of the instrument, the items that make up the construct known as psychoticism, the definition and understanding given by Eysenck of the construct known as psychoticism, the psychometric properties of the psychoticism scale, examples of research undertaken using the psychoticism scale and a summary of the findings.

### **Eysenck Personality Questionnaire**

#### ***Developing the psychoticism scale of the EPQ***

It was in 1952 that Eysenck first suggested that in addition to neuroticism and introversion-extraversion there was a third dimension of personality, called psychoticism, which was orthogonal to neuroticism and extraversion (Eysenck, 1952b).

The concept of psychoticism originated with the review of Kretschmer's (1948) theory of schizothymia – cyclothymia (Eysenck, 1950). Kretschmer's theory of personality postulated a dimension of personality ranging from schizophrenia to manic-depressive illness, via the rather less psychiatrically ill groups of schizoids and cycloids and the normal sub-variants Kretschmer called dystonics and syntonics.

Using Kretschmer's theory, Eysenck (1952b) hypothesised, first, that the functional psychoses (schizophrenic and manic-depressive insanity) are not qualitatively different from normal mental states, but form one extreme of a continuum which goes all the way from the perfectly normal, rational to the completely insane, psychiatric individual. All possible intermediate steps are represented on this continuum.

The second hypothesis was that the two main functional psychoses (schizophrenia and manic-depressive insanity) show patterns of traits which are observable in non-psychotic persons also, although in a less extreme degree, and which give rise to a continuum running from the extreme schizothyme to the extreme cyclothyme, again with all intermediate steps being represented along this continuum. These continua are presumed to be orthogonal to each other.

To prove these two hypothesis Eysenck (1952b) had to test three groups of people, a normal group, a schizophrenic, and a manic-depressive group. The normal group consisted of soldiers (mainly conscripts, but also included a few volunteers and professional soldiers), who had been selected on a random basis by the commanding officer and who had agreed voluntarily to take part in the experiment. The two psychotic groups were drawn, with the exception of a few cases tested at West Park Hospital, from the in-patient population at Maudsley and Bethlem Royal Hospitals, and were non-certified (voluntary) patients. Great care was taken to include in the two groups, schizophrenic and manic-depressive only cases. The normal group was made up of 100 men, with an average age of 21 years. The schizophrenic group was made up of 24 men and 26 women, with an average age of 28. The manic-depressive group was made up of 25 men and 25 women, with an average age of 46.

A number of objective tests were administered and the significance of differences established, by means of analysis of variance. The factor analysis was performed on the intercorrelations of tests for the normal and the psychotic groups separately, and the method of criterion analysis used in order to verify deductions made from the original hypotheses. The first hypothesis was verified, that functional psychoses (schizophrenic and manic-depressive insanity) are not qualitatively different from normal mental states, but form one extreme of a continuum running all the way from the perfectly normal, rational to the completely insane, psychiatric individual. All possible intermediate steps are represented on this continuum. The second hypothesis was not verified.

It was not until 1968 that Eysenck and Eysenck tackled the problem of measuring this hypothesis of a third dimension of personality, namely psychoticism, by a personality inventory. In that year they constructed a 106 item questionnaire (S. B. G. Eysenck & H. J. Eysenck, 1968) from the information they had gained over a number of years through clinical experience acquired during ward rounds, diagnostic conferences and diagnostic testing of patients. Through these observations Eysenck and Eysenck (1976) hypothesised that a 'typical' high psychoticism scorer would be 'cold, impersonal, hostile, lacking in sympathy, unfriendly, untrustful, odd, unemotional, unhelpful, antisocial, lacking in human feelings, inhumane, generally bloody-minded, lacking in insight, strange with paranoid ideas that people were against him.'

Given this understanding Eysenck and Eysenck began constructing a questionnaire, by writing psychoticism items, adapting items from previous questionnaires and taking some items from questionnaires without changing them. The items used by Eysenck and Eysenck to construct their own questionnaire were taken from the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway & McKinley, 1976), Cattell's published scales (Cattell, 1957) and Guilford's scales (Guilford & Guilford, 1934, 1936, 1939a, 1939b)

When their questionnaire was complete they added to it items known to be good measures of extraversion and neuroticism. Due to the large number of items used factor analysis was impossible so the following method was initiated (H. J. Eysenck & S. B. G. Eysenck, 1968). A member of the staff of the department was associated with a commercial market research organisation which held weekly parties to which random samples of the

population were invited; they were shown films, given presents and were asked to take part in competitions. Eysenck and Eysenck were allowed to introduce into this 'party' a short questionnaire of some 24 questions; the questions varied from week to week, but each questionnaire was answered by a group of around 300 subjects.

Each week the questionnaire consisted of six extraversion questions and six neuroticism questions taken from a large stock of questions with known factor loadings on extraversion and neuroticism. Also included were 12 psychoticism questions, introduced in order to test whether these were independent of extraversion and neuroticism, and also to see whether they correlated together to form a separate factor. Each set of questions were then factor analysed by the principal components method, and three factors extracted; two of these were always clearly extraversion and neuroticism, while the third was usually made up of several of the hypothetical psychoticism items. Some of these hypothetical items had no psychoticism loadings, others had high neuroticism loadings, or more rarely, high extraversion loadings. Items having high psychoticism loadings and low extraversion and neuroticism loadings were retained and included again on another occasion, together with a new batch of prospective psychoticism items; if they proved themselves again they were considered for the final scale. This process was carried out over a long period of time, until Eysenck and Eysenck had accumulated a sufficient number of items to make possible the next stage of testing.

These items were once again administered to the groups attending the commercial market research organisation parties. A total of 849 women and 550 men were tested, but of these

a few failed to complete the questionnaire, so the numbers forming part of the analysis were 821 women and 512 men.

Coefficients of factor comparison were calculated between the sexes to determine the degree to which the factors in one sex were replicable in the other. The figures are all reasonably high: neuroticism .960; extraversion .979; psychoticism .948. The factors are not however, independent of one another in either sample. The correlations for the women are: neuroticism/extraversion .15; neuroticism/psychoticism .34; extraversion/psychoticism -.05, and for the men: neuroticism/extraversion .14; neuroticism/psychoticism .30; extraversion/psychoticism -.13. Three factors were clearly identifiable as psychoticism, extraversion and neuroticism.

At various stages during the testing of the questionnaire, psychotic, neurotic and criminal samples were also tested to ensure that the psychoticism scale was measuring what it was supposed to be measuring. As a result of research undertaken with the PEN scale it became clear that the significant correlation between neuroticism and psychoticism needed to be eliminated. An attempt was made to rectify the correlation by changing several items. This new scale was then given to 170 normal male and 192 normal female subjects (Eysenck & Eysenck, 1972).

The subjects were administered a 110 item questionnaire which included four types of items, believed on the basis of prior work and theoretical analysis to measure four different dimensions of personality. These included neuroticism items, extraversion items,

psychoticism items, and in addition lie scale items forming a scale for the detection of dissimulation. If the questionnaire is successful the factors should correspond in their make up to the hypothetical factors psychoticism, extraversion, neuroticism and lie scale and should also be orthogonal, that is, uncorrelated with each other. The results show that, for the men, reliabilities for the scales are satisfactory, and that psychoticism is not significantly lower than extraversion or the lie scale for the women, the reliabilities are much the same as for the men, except for psychoticism, which is significantly lower.

Intercorrelations between the 20 item scales are low. The only consistent relationship which appears is the negative correlation between lie scale and neuroticism and so Eysenck and Eysenck (1972) claim that they have succeeded in writing a set of items which would be reliable and orthogonal to existing factors.

All these investigations reported above precede the analysis which resulted in the final version of the inventory. Attention will now be directed towards the construction of the final version of the psychoticism scale.

The psychoticism, extraversion, and neuroticism scales used in the Eysenck Personality Questionnaire were developed through a lengthy series of about 20 factorial studies (Eysenck & Eysenck, 1975) using in each case different items selected partly on the basis of the results obtained in previous analysis, partly on the basis of theoretical considerations. The two main inventories which have been quite widely used, and which are in most aspects quite similar to the Eysenck Personality Questionnaire were the

Personality Inventory (PI) and the PEN (Psychoticism, Extraversion and Neuroticism) questionnaire. Although a determined effort has been made to select the best items, rewrite items which were considered promising, and introduce new items only where there was a good reason to think that they would round out the existing factor structure.

The original psychoticism items in the 106 item PEN questionnaire consist of the following items:

- Do most things taste the same to you?
- Do you enjoy hurting people you love?
- Are you generally in good health?
- Was your mother a good woman?
- Have you had more trouble than most?
- Have you had an awful lot of bad luck?
- Do you worry a lot about catching diseases?
- Did you love your mother?
- Are there several people who keep trying to avoid you?
- Is there someone who is responsible for most of your troubles?
- Do you let your dreams warn or guide you?
- Do people generally seem to take offence easily?
- Would you take drugs which may have strange or dangerous effects?
- Do you have enemies who wish to harm you?
- Do your friendships break up easily without it being your fault?
- Was your father a good man?

- Do people mean to say and do things to annoy you?
- Would you have been more successful if people had not put difficulties in your way?
- When you are in a crowded place like a bus do you worry about dangers of infection?
- Would it upset you a lot to see a child or animal suffer?

Eysenck and Eysenck (1972) developed the above questions and constructed a further questionnaire and called it the Personality Inventory (PI) which consisted of 110 items, including the following psychoticism items:

- Do most things taste the same to you?
- Would it upset you a lot to see a child or an animal suffer?
- Do you think that marriage is old-fashioned and should be done away with?
- Do you love your mother?
- Do you enjoy hurting people you love?
- Would you like to think that other people are afraid of you?
- Would you take drugs which may have strange or dangerous effects?
- Do you enjoy practical jokes that can sometimes really hurt people?
- Is your mother a good person?
- Have you always been known as a loner?
- Do your friendships break up easily without it being your fault?
- Would you feel very sorry for an animal caught in a trap?
- Are you always specially careful with other people's things?

- When you are in a crowd, do you worry about catching germs?
- Do you try not to be rude to people?
- Do you sometimes get cross?
- Have you ever told a lie?
- Do good manners and cleanliness matter much to you?
- Did you mind filling in this questionnaire?

When comparing the PEN questions and the Personality Inventory questions with the final Eysenck Personality Questionnaire it can be seen that Eysenck and Eysenck (1975) have used items 11, 22, 26, 50, 76, from the two original questionnaires; items 30, 65 from the first PEN questionnaire (Eysenck & Eysenck, 1968) and items, 33, 37, 43, 71, 90 from the PI questionnaire (Eysenck & Eysenck, 1972). There are two reworded questions:

- Is (or was) your mother a good woman? EPQ / Is your mother a good person? PI / Was your mother a good women? PEN
- Would you like other people to be afraid of you? EPQ / Would you like to think that other people are afraid of you? PI

There are 11 new items.

Eysenck and Eysenck (1976) claim that the items included in the Eysenck Personality Questionnaire are 'largely identical with those used in previous versions, that is, the PEN and the Personality Inventory.' This is debatable especially when over half the items in the Eysenck Personality Questionnaire psychoticism scale are new.

### ***Psychoticism scale items in the EPQ***

In the Eysenck Personality Questionnaire psychoticism was assessed by the following 25 items:

- Do you stop to think things over before doing anything?
- Would being in debt worry you?
- Do you lock up your house carefully at night?
- Would it upset you a lot to see a child or animal suffer?
- Do you believe insurance schemes are a good idea?
- Would you take drugs which may have strange or dangerous effects?
- Do you enjoy hurting people you love?
- Do you have enemies who want to harm you?
- Do you enjoy practical jokes that can sometimes really hurt people?
- Do good manners and cleanliness matter much to you?
- Do you think marriage is old-fashioned and should be done away with?
- Do people who drive carefully annoy you?
- Do most things taste the same to you?
- Does it worry you if you know there are mistakes in your work?
- Do you like to arrive at appointments in plenty of time?
- Is (or was) your mother a good woman?
- Are there several people who keep trying to avoid you?
- Do you think people spend too much time safeguarding their future with savings and insurances?
- Do you try not to be rude to people?

- When you catch a train do you often arrive at the last minute ?
- Do your friendships break up easily without it being your fault?
- Do you sometimes like teasing animals?
- Would you like other people to be afraid of you?
- Do people tell you a lot of lies?
- Would you feel very sorry for an animal caught in a trap?

### ***Defining psychoticism in the EPQ***

The *Manual of the Eysenck Personality Questionnaire* (Eysenck & Eysenck, 1975)

describes a high psychoticism scorer as:

solitary, not caring for people; he is often troublesome, not fitting in anywhere. He may be cruel and inhumane, lacking in feeling and empathy, and altogether insensitive. He is hostile to others, even his own kith and kin, and aggressive, even to loved ones. He has a liking for odd and unusual things, and a disregard for danger; he likes to make fools of other people, and to upset them.

### ***Psychometric properties of the EPQ psychoticism scale***

S. B. G. Eysenck and H. J. Eysenck (1968) in their paper 'The Measurement of Psychoticism: a study of factor stability and reliability' report on the personality dimension psychoticism and build on their previous research (H. J. Eysenck & S. B. G. Eysenck, 1968). Using the same 106 item questionnaire they administered it to 500 men and 500 women whom they have termed their normal sample, they have also administered it to 700 male and 700 female students.

The results showed that the factors of psychoticism, extraversion and neuroticism were found, as predicted; that reliable scales can be constructed from the available items from psychoticism; and that the factors were relatively invariant from one sex to another. It appears that neuroticism and psychoticism are not entirely independent, that a correlation of .3 was discovered between the factors. Table 4.1 shows the reliabilities of the 20 psychoticism items that were extracted from the main questions in the questionnaire.

Table 4.1 Reliability of the 20 psychoticism items from S. B. G. Eysenck and H. J. Eysenck (1968).

NS, males	.81
NS, females	.70
NS (original sample) males	.77
NS Females	.72
Students, males	.66
Students, females	.76

The 20 questions are:

- Do most things taste the same to you?
- Do you enjoy hurting people you love?
- Are you generally in good health?
- Was your mother a good woman?
- Have you had more trouble than most?
- Have you had an awful lot of bad luck?
- Do you worry a lot about catching diseases?

- Did you love your mother?
- Are there several people who keep trying to avoid you?
- Is there someone who is responsible for most of your troubles?
- Do you let your dreams guide or warn you?
- Do people generally seem to take offence easily?
- Would you take drugs which may have strange or dangerous effects?
- Do you have enemies who wish to harm you?
- Do your friendships break up easily without it being your fault?
- Was your father a good man?
- Do people mean to say and do things to annoy you?
- Would you have been more successful if people had not put difficulties in your way?
- When you are in a crowded place like a bus do you worry about dangers of infection?
- Would it upset you a lot to see a child or animal suffer?

Loo (1979) administered the Eysenck Personality Questionnaire to 139 females and 123 males in order to investigate the psychometric properties of the Eysenck Personality Questionnaire. The results show that the reliabilities for the psychoticism scale were much lower than those in the norms and may reflect an undesirably high degree of heterogeneity in the psychoticism scale. The results for the psychoticism scale are set out in table 4.2.

Putnins (1982) in his study on delinquency prediction obtained a reliability of .81 on the

psychoticism scale.

Table 4.2 mean scores on the psychoticism scale from Loo (1979)

Sample	N	M	SD	Reliability
Females	139	2.08	1.76	.44
Males	123	3.47	2.28	.43
Total	262	2.73	2.12	.50

The publication of both *Psychoticism as a Dimension of Personality* (Eysenck & Eysenck, 1976) and the Eysenck Personality Questionnaire (EPQ; Eysenck and Eysenck, 1975) produced many criticisms of the psychometric properties of the psychoticism scale (Bishop, 1977; Block, 1977a; Block, 1977b). There were three major faults in this original psychoticism scale. The first of these faults is the low reliability of the scale, .74 for males and .68 for females (Eysenck, Eysenck & Barrett, 1985). The second fault is the low range of scoring, with means of 3.78 for males and 2.63 for females (Eysenck, Eysenck & Barrett, 1985). The fact that standard deviations were almost identical with means (3.09 and 2.36) indicates the third fault, a grossly skewed distribution of scores. As a consequence of these faults Eysenck, Eysenck, and Barrett, (1985) set out to improve the psychometric weaknesses in the psychoticism scale of the Eysenck Personality Questionnaire.

### ***Applying the EPQ psychoticism scale***

The PEN inventory has been used to assess the relationship between personality and age, sex and social class (S. B. G. Eysenck & H. J. Eysenck, 1969) and transcendental meditation (Williams, Francis & Durham, 1976).

S. B. G. Eysenck and H. J. Eysenck (1969) used their recently constructed PEN inventory (Eysenck & Eysenck, 1968; Eysenck & Eysenck, 1968) to assess the relationship between the three personality variables and age, sex and social class. The inventory containing 20 extraversion, 20 neuroticism and 20 psychoticism questions was administered to 1,423 adult males and 968 females as well as to 1,400 students of both sexes and to 327 housewives. Analysis by age, sex and social class showed that young people are high on psychoticism, that males are high on psychoticism and that middle class people are low on psychoticism.

Verma and Eysenck's (1973) study used the PEN personality inventory among 68 psychotic men and 85 psychotic women along with symptom ratings and objective tests. The data were analysed by factor analysis. Three major factors appeared and were named psychoticism, extraversion and neuroticism. The results added support to the hypothesis that the psychoticism scale of the PEN inventory can be regarded as a valid measure of psychoticism.

Williams, Francis and Durham (1976) administered the PEN personality inventory to a group of people undertaking transcendental meditation. The results showed that female meditators had a higher mean psychoticism score.

The Eysenck Personality Questionnaire has been used to measure the relationship between personality and assertiveness and aggression (Hernandez & Mauger, 1980); personality and marital satisfaction (Zaleski, 1981); personality and prisoners (Putnins 1982); personality and alcoholism (Rankin, Stockwell & Hodgson, 1982); personality and poverty (Rim 1984); personality and drug addicts (Gossop & Eysenck, 1983); personality and inhibition and sensation seeking (Bullen & Hemsley 1984; Stewart & Hemsley, 1984); personality and job satisfaction (Furnham & Zacherl, 1986) and personality and religion (Caird, 1987, White, Joseph & Neil, 1995 ; Hills & Argyle, 1998).

Hernandez and Mauger (1980) used the Eysenck Personality Questionnaire to assess the relationship between assertiveness, aggressiveness and personality. Assertiveness and aggressiveness was measured by the Interpersonal Behaviour Survey (IBS, Mauger, Adkinson, Hernandez, Hook & Firestone, 1978). Two samples were used. Sample one consisted of 12 psychiatric inpatients, 67 college students and 69 state prison inmates. Sample two consisted of 50 psychiatric inpatients. The results showed a significant positive correlation between psychoticism and aggression.

Zaleski's (1981) paper on marital satisfaction used the Eysenck Personality Questionnaire psychoticism scale to assess psychoticism and marital satisfaction. Thirty happy and unhappy couples completed the Eysenck Personality Questionnaire and the results show that on the psychoticism scale both unhappy women and unhappy men scored significantly higher than their happy counterparts.

Putnins (1982) administered the Eysenck Personality Questionnaire to 75 young people who were aged between 15 and 18. The subjects were inmates at a South Australian correctional institution. The results showed that the mean psychoticism scores of the group who offended during the 12 months follow up were higher than the non offenders and the difference was statistically significant ( $p < .01$ ).

Rankin, Stockwell and Hodgson (1982) used the Eysenck Personality Questionnaire among a group of people suffering from alcoholism. The group was split into 65 severely dependant male alcoholics, 36 moderately dependent male alcoholics, 16 dependant female alcoholics, 20 moderately dependent female alcoholics. The results show that the severely dependent men score significantly higher on psychoticism than less dependent men ( $p < .02$ ) and severely dependent women score higher on psychoticism than moderately dependent women ( $p < .05$ ).

Rim (1984) uses the Eysenck Personality Questionnaire to explain poverty from a personality aspect. A total of 137 subjects aged between 18 and 36 were asked to rate on a 7 point scale the importance of 15 explanations of poverty, four were individualistic explanations; seven were social explanations and four were fatalistic explanations. The results show that subjects who score high on the psychoticism scale give more societal explanations for poverty.

Gossop and Eysenck (1983) compared the personality of drug addicts in treatment with that of a prison population. A total of 1,226 subjects took part in the study, 221 made up

the drug-dependant sample and 934 males and 71 females made up the prison population. The results showed that the drug addicts returned higher psychoticism scores than the prison population.

Bullen and Hemsley (1984) administered the Eysenck Personality Questionnaire to 11 people, 5 were female and 6 were male. The results show a negative correlation between psychoticism and the size of inhibition ( $p < .01$ ).

Stewart and Hemsley's (1984) study investigated the relationship between personality and expectancy of gain (Egn) and likelihood of action (L/A) in criminal situations. Personality was assessed using the Eysenck Personality Questionnaire and Zuckerman's Sensation Seeking Scale (Zuckerman & Link, 1968). Expectancy of gain and likelihood of action were assessed by means of an inventory of hypothetical criminal-risk situations. The results show a significant positive relationship of .45 ( $p < .01$ ) between psychoticism and Egn in all subjects.

Furnham and Zacherl (1986) examined the relationship between personality and job satisfaction using the Eysenck Personality Questionnaire, the index of Organisational Reactions (IOR, Smith, 1976; Smith, 1977) and the Job Function questionnaire (JFQ, Zackerl, 1984). The sample consisted of 88 (69 male and 19 female) computer employees. The results showed that people scoring high on the psychoticism scale tended to have lower job satisfaction. People with high psychoticism scores tended to be significantly less satisfied with their superiors, the nature of the work and their co-workers than people

with low psychoticism scores.

Caird (1987) administered Hood's mystical experience scale (Hood, 1975) and the Eysenck Personality Questionnaire to 115 students enrolled in first-year Religious Studies at the University of Queensland. The results do not offer any support that mystical experience is linked with psychoticism.

White, Joseph and Neil (1995) investigated the relationship between scores on the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987) and the Eysenck Personality Questionnaire amongst 183 people. The results showed that there is a negative association between religiosity and psychoticism.

Hills and Argyle (1998) used the Eysenck Personality Questionnaire among 275 individuals alongside a scale of 10 items to assess church membership. The results show that church members had lower psychoticism scores ( $p < .001$ ).

## **Eysenck Personality Questionnaire Revised**

### ***Developing the psychoticism scale of the EPQR***

In their attempt to improve the psychoticism scale Eysenck, Eysenck and Barrett (1985) attempted to increase the internal reliability of the scale, improve the shape of distribution and increase the mean and variance score.

Two different studies were conducted, the first study (A) used a 90 item questionnaire which contained the Eysenck Personality Questionnaire psychoticism scale plus new items together with 12 extraversion and 13 neuroticism items selected from the Eysenck Personality Questionnaire. The sample tested consisted of a randomly selected group of 384 men and 290 women.

The second study (B) used a 117 item questionnaire which contained all the 90 items of the Eysenck Personality Questionnaire plus almost all the possible new psychoticism items used in the questionnaire of study A. The sample consisted of 408 men and 494 women which included students and teachers and others who were willing to complete the questionnaire. The results of the two studies give a new scale which consists of 13 new psychoticism items:

- Do you take much notice of what people think?
- Do you give money to charities?
- Do you dislike people who don't know how to behave themselves?
- Should people always respect the law?
- Are good manners very important?
- Do you prefer to go your own way rather than act by the rules?
- Have you often gone against your parents wishes?
- Are you more easy-going about right and wrong than most people?
- Do you enjoy co-operating with others?
- Do you generally 'look before you leap'?

- Can you on the whole trust people to tell the truth?
- Is it better to follow society's rules than go your own way?
- Do you believe one has special duties to one's family?

There are 19 original items:

- Do you stop to think things over before doing anything?
- Would being in debt worry you?
- Would it upset you a lot to see a child or animal suffer?
- Would you take drugs which may have strange or dangerous effects?
- Do you enjoy hurting people you love?
- Do you have enemies who want to harm you?
- Do you enjoy practical jokes that can sometimes really hurt people?
- Do good manners and cleanliness matter much to you?
- Do you think marriage is old-fashioned and should be done away with?
- Do most things taste the same to you?
- Does it worry you if you know there are mistakes in your work?
- Do you like to arrive at appointments in plenty of time?
- Is (or was) your mother a good woman?
- Are there several people who keep trying to avoid you?
- Do you think people spend too much time safeguarding their future with savings and insurances?
- Do you try not to be rude to people?
- Would you like other people to be afraid of you?

- Do people tell you a lot of lies?
- Would you feel very sorry for an animal caught in a trap?

The new scale omits six items from the original 25 item Eysenck Personality Questionnaire psychoticism scale. They are:

- Do you lock up your house carefully at night?
- Do you believe insurance schemes are a good idea?
- Do people who drive carefully annoy you?
- When you catch a train do you often arrive at the last minute?
- Do your friendships break up easily without it being your fault?
- Do you sometimes like teasing animals?

The main reason for these omissions was the lack of consistent loadings on the psychoticism factors. This gives a new psychoticism scale of 32 items and the reliability of the scale gives an alpha coefficient of .78 for males and .76 for females which contrasts with .74 for males and .68 for females as quoted in the *Manual of the Eysenck Personality Questionnaire* (Eysenck & Eysenck, 1975).

### ***Psychoticism scale items in the EPQR***

- Do you stop to think things over before doing anything?
- Do you take much notice of what people think?
- Would being in debt worry you?
- Do you give money to charities?

- Would it upset you a lot to see a child or animal suffer?
- Do you dislike people who don't know how to behave themselves?
- Should people always respect the law?
- Are good manners very important?
- Would you take drugs which may have strange or dangerous effects?
- Do you prefer to go your own way rather than act by the rules?
- Do you enjoy hurting people you love?
- Do you have enemies who want to harm you?
- Do you enjoy practical jokes that can sometimes really hurt people?
- Do good manners and cleanliness matter much to you?
- Have you often gone against your parents' wishes?
- Do you think marriage is old-fashioned and should be done away with?
- Are you more easy-going about right and wrong than most people?
- Do you enjoy co-operating with others?
- Do most things taste the same to you?
- Does it worry you if you know there are mistakes in your work?
- Do you like to arrive at appointments in plenty of time?
- Is (or was) your mother a good woman?
- Are there several people who keep trying to avoid you?
- Do you think people spend too much time safeguarding their future with savings and insurances?
- Do you try not to be rude to people?
- Do you generally 'look before you leap'?

- Can you on the whole trust people to tell the truth?
- Is it better to follow society's rules than go your own way?
- Would you like other people to be afraid of you?
- Do people tell you a lot of lies?
- Do you believe one has special duties to one's family?
- Would you feel very sorry for an animal caught in a trap?

### ***Defining psychoticism in the EPQR***

A high psychoticism scorer is described in *The Manual of the Eysenck Personality Scales*

(Eysenck & Eysenck, 1991) as:

solitary, not caring for people; he is often troublesome, not fitting in anywhere. He may be cruel or inhuman, lacking in feeling and empathy, and altogether insensitive. He is hostile to others, even his own kith and kin, and aggressive, even to loved ones. He has a liking for odd and unusual things, and a disregard for danger; he likes to make fools of other people, and to upset them.

Socialization is a concept which is relatively alien to high psychoticism scorers; empathy, feelings of guilt, sensitivity to other people are notions which are strange and unfamiliar to them.

### ***Psychometric properties of the EPQR psychoticism scale***

San-Martini and Mazzotti (1990) administered an Italian version of the Revised Eysenck Personality Questionnaire to 306 undergraduate students. The results showed a mean score of 8.0, standard deviation of 3.9 and an alpha coefficient of .72. The psychoticism scale shows a higher internal reliability than older scales.

Wilson and Doolabh (1992) evaluated the internal consistency of the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck & Barrett, 1985) among 670 black Zimbabwean students. The results showed an alpha coefficient of .61 for males and .49 for females.

Eysenck, Barrett and Barnes (1993) administered the Revised Eysenck Personality Questionnaire to 615 male and 642 female Canadians. The results showed an alpha coefficient of .66 for the males and .62 for the females on the psychoticism scale.

San-Martini, Mazzoti and Setaro (1996) administered an Italian version of the Revised Eysenck Personality Questionnaire to 553 subjects. The results showed that in comparison with the older version, the revised version of the psychoticism scale shows a larger range of scoring and a slightly higher internal reliability. Cronbach's alpha coefficient in males is .80 and .70 for females on the psychoticism scale.

Strelau and Zawadzki (1997) administered a Polish version of the Revised Eysenck Personality Questionnaire (Drwal, 1995) to 1,817 people. The results showed an alpha coefficient of .70 for the psychoticism scale, which reveals a slightly higher internal reliability than the psychoticism scale of the Eysenck Personality Questionnaire.

Ortet, Ibanz, Moro, Silva and Boyle (1999) administered a Spanish version of the Revised Eysenck Personality Questionnaire to 527 men and 583 women. The alpha coefficient for males is .73 and .71 for females. Test-retest reliabilities using a sample of 159 subjects

was .72 which indicates that the scales are highly reliable and stable.

### ***Applying the EPQR psychoticism scale***

Heaven, (1990) administered the Revised Eysenck Personality Questionnaire and the value survey (Braithwaite & Law, 1985) to 185 Australian adolescents. The results showed that males scored significantly higher on the psychoticism scale than females and that high scores on the psychoticism scale correlated negatively with traditional religiosity at the .01 level of significance among males.

Lolas, Gomez and Suarez (1991) administered the Revised Eysenck Personality Questionnaire to 63 women who were referred to the outpatient psychiatric unit of the general hospital because of attempted suicide. Psychoticism appeared as the most relevant dimension related to hopelessness, suicidal ideation and number of previous attempts.

Lodi and Thakur (1993) administered the Revised Eysenck Personality Questionnaire in Marathi to a group of 58 crude-heroin ('brown sugar') addicts and a comparison sample of 58 male non addicts. The results showed the addicts scored higher than the comparison group on the psychoticism scales.

Yeung and Hemsley (1996) administered the Revised Eysenck Personality Questionnaire among 44 women to assess the effects of personality and acute exercise on mood states. The results showed that those with higher psychoticism scores experience a greater

reduction in negative affect, indicating that higher psychoticism scorers benefited the most from the stress alleviating affects of exercise.

Merten and Ruch (1996) administered the German Version of the Revised Eysenck Personality Questionnaire and Carroll's Rating scale of Depression both conventionally in the written forms and in computerised form in order to compare the results. They found no differences between the two modes of application.

## **Eysenck Personality Questionnaire Revised: short form**

### ***Developing the EPQR- short form***

Having completed the analyses of the data for the full Revised Eysenck Personality Questionnaire 100 item scale in order to improve the psychometric properties of the psychoticism scale the authors thought it desirable to devise a short scale of the Revised Eysenck Personality Questionnaire for use when time is limited. The scale consisted of 12 items from each of the scales of psychoticism, extraversion and neuroticism. The psychoticism scale has an alpha coefficient of .62 for males and .61 for females.

### ***Psychoticism scale items in the EPQR-short form***

- Do you take much notice of what people think?
- Would being in debt worry you?
- Would you take drugs which may have strange or dangerous effects?
- Do you prefer to go your own ways rather than act by the rules?

- Do good manners and cleanliness matter much to you?
- Do you think marriage is old fashioned and should be done away with?
- Do you enjoy co-operating with others?
- Does it worry you if there are mistakes in your work?
- Do you think people spend too much time safeguarding their future with savings and insurances?
- Do you try not to be rude to people?
- Would you like other people to be afraid of you?
- Is it better to follow society's rules than go your own way?

### ***Defining psychoticism in the EPQR-short form***

Since the short form of the Revised Eysenck Personality Questionnaire psychoticism scale is explicitly derived from the parent edition of the Revised Eysenck Personality Questionnaire no separate definition of psychoticism has been provided in the literature in respect of the short form scale.

### ***Psychometric Properties of the EPQR-short form psychoticism scale***

Wilson and Doolabh (1992) evaluated the internal consistency of the short form of the Revised Eysenck Personality Questionnaire among 670 black Zimbabwean students. The results showed an alpha coefficient of .50 for males and .45 for females.

### ***Applying the EPQR-short form psychoticism scale***

Raine and Manders (1988) administered the short form of the Revised Eysenck Personality Questionnaire to 33 subjects in order to assess schizoid personality, inter-hemispheric transfer and left hemisphere activation. The results showed no relation between psychoticism and the schizoid personality scales.

Pearson (1989) administered the short form of the Revised Eysenck Personality Questionnaire and the Gibson spiral maze test of the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gilleard, 1979) to 46 psychogeriatric patients. The results showed a significant correlation between psychoticism and error score ( $p < .01$ ).

Pearson (1990a) administered the short form of the Revised Eysenck Personality and the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gilleard, 1979) to 32 psychogeriatric patients suffering from depression and anxiety and 34 psychgeriatric patients diagnosed as suffering from dementia. No relationship was found between personality and behavioural disability.

Pearson (1990b) administered the short form of the Revised Eysenck Personality Questionnaire and the I<sub>7</sub> impulsiveness questionnaire and the Clifton Assessment Procedures for the Elderly (CAPE, Pattie & Gilleard, 1979) to 72 patients. No relationship was found between psychoticism and the spiral maze error score.

## **Eysenck Personality Questionnaire Revised: abbreviated form**

### ***Developing the psychoticism scale of the EPQR-A***

The abbreviated form of the Revised Eysenck Personality Questionnaire was developed by Francis, Brown and Philipchalk (1992) because it was felt that the short form of the Revised Eysenck Personality Questionnaire was still too long. They administered both the Eysenck Personality Questionnaire and the short form of the Revised Eysenck Personality Questionnaire to 59 men and 153 women in England, 57 men and 92 women in Canada and 51 men and 81 women in the USA. The results of the psychoticism scale recorded alpha coefficients of .51 for the English sample, .38 for the Canadian sample, and .32 for the American sample.

### ***Psychoticism scale items in the EPQR-A***

- Would being in debt worry you?
- Would you take drugs which may have strange or dangerous effects?
- Do you prefer to go your own way rather than act by the rules?
- Do you think marriage is old fashioned and should be done away with?
- Does it worry you if you know there are mistakes in your work?
- Is it better to follow society's rules than go your own way?

### ***Defining psychoticism in the EPQR-A***

There is no separate definition for psychoticism in the abbreviated form of the Revised Eysenck Personality Questionnaire because it is directly derived from the Revised Eysenck Personality Questionnaire.

### ***Psychometric properties of the EPQR-A psychoticism scale***

Maltby (1995b) administered the abbreviated form of the Revised Eysenck Personality Questionnaire to 92 US female students. The results showed an alpha coefficient of .75.

Lewis and Maltby (1996) administered the abbreviated form of the Revised Eysenck Personality Questionnaire to 100 male students. The results showed an alpha coefficient on the psychoticism scale of .81.

Maltby, Talley, Cooper and Leslie (1995) administered the abbreviated form of the Revised Eysenck Personality Questionnaire to 324 adults from two United States of America Southern Baptist town communities. The results showed an alpha coefficient of .62 for psychoticism.

Maltby (1999) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and an amended version of the age Universal I-E scale (Gorsuch & Venable, 1983) to two groups of students. The first sample comprised 213 students from England and the second sample comprised 172 students from Northern Ireland. The results show Cronbach alpha coefficients of .64 for the English sample and .63 for the Northern Irish sample.

### ***Applying the EPQR-A psychoticism scale***

The abbreviated form of the Revised Eysenck Personality Inventory has been used to assess the relationship between personality and religion (Maltby, 1995b; Lewis & Maltby, 1996; Maltby, Talley, Cooper & Leslie, 1995; Maltby, 1999).

Maltby (1995b) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and asked 92 US female students about their frequency of church attendance and personal prayer in order to assess the relationship between personality and religion. A significant negative relationship was found between psychoticism and frequency of personal prayer ( $p < .01$ ) and church attendance ( $p < .01$ ).

Lewis and Maltby (1996) administered the abbreviated form of the Revised Eysenck Personality Questionnaire and two questions about religion, church attendance and frequency of prayer to 100 male students. The results showed a significant negative association between psychoticism and frequency of personal prayer ( $p < .01$ ). With lower scores on the psychoticism scale being associated with greater frequency of personal prayer.

Maltby, Talley, Cooper and Leslie (1995) administered the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987), the age Universal I-E scale (Gorsuch & Venable, 1983) and the abbreviated form of the Revised Eysenck Personality Questionnaire. The results showed that low psychoticism is fundamental to a personal orientation towards religion.

Maltby (1997) administered the abbreviated form of the Revised Eysenck Personality Questionnaire, together with the Francis Scale of Attitude towards Christianity (Francis & Stubbs, 1987) and asked questions about frequency of church attendance and personal prayer in order to assess the relationship between personality and religion. The sample

consisted of 216 adults from Dublin. The results reveal a significant correlation between scores on psychoticism and religious attitude, frequency of personal prayer and church attendance among both men and women.

Maltby (1999) administered the abbreviated form of the Revised Eysenck Personality Questionnaire form and an amended version of the age Universal I-E scale (Gorsuch & Venable, 1983) to two groups of students. The first sample comprised 213 students from England and the second sample comprised 172 students from Ireland. The results show in both the English and Irish samples that intrinsic orientation towards religion is found to correlate negatively with psychoticism.

### *Summary*

This chapter has set out the theory and development of the higher order factor of psychoticism as proposed by Eysenck and his associates. Eysenck and Eysenck (1976) hypothesised that a typical high psychoticism scorer would be 'cold, impersonal, hostile, lacking in sympathy, unfriendly, untrustful, odd, unemotional, and unhelpful.' The first questionnaire to measure psychoticism was the PEN (Eysenck & Eysenck, 1968) and whilst many of the questions reflect the description given by Eysenck and Eysenck there is also an emphasis on health which was originally a construct of neuroticism. The second scale developed by Eysenck and Eysenck (1976) was the Personality Inventory (PI) many of the questions from the PEN have been amended and new items included, one of the main differences has been the move away from using the past tense in the questions to using the present tense. The Personality Inventory also loses some of the questions

relating to health. The third questionnaire constructed to measure psychoticism was the Eysenck Personality Questionnaire (Eysenck, & Eysenck, 1975). The Eysenck Personality Questionnaire consists of 2 items from the PEN questionnaire, 5 from the Personality Inventory, and 5 items that were included in both these questionnaires, 2 items were reworded and there are 11 new items. Eysenck and Eysenck (1976) claim that the items included in the Eysenck Personality Questionnaire are 'largely identical with those used in previous versions, that is the PEN and the Personality Inventory,' this comment is debatable when over half the items in the Eysenck Personality Questionnaire are new and when the impulsivity items have moved from the extraversion scale to the psychoticism scale.

The fourth scale developed to measure psychoticism was the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck & Barrett, 1985). This scale consists of 32 items and includes 19 from the Eysenck Personality Questionnaire and 13 new items. The description of a high psychoticism score remains the same. The short form of the Revised Eysenck Personality Questionnaire reduces the number of items in the psychoticism scale to 12 and the abbreviated form of the Revised Eysenck Personality Questionnaire (Francis, Brown & Philipchalk, 1992) reduces the scale to 6 items.

It is clear from this review that the higher order dimension of psychoticism remains quite fluid in the different scales that Eysenck develops and that there is a different balance of items in the different versions of the Eysenckian psychoticism scales. Consequently different constructs of psychoticism are being measured in the different scales. Two

consequences emerge from this observation. First, it may not always be sensible to generalize findings derived from the application of one edition of the psychoticism scale to all editions of the scale. Second, when significant correlations are established between psychoticism and other variables it may not always be possible to understand or know which components of the higher order dimension of personality are in fact contributing to the relationship. There may be advantages, therefore, in employing an instrument which deliberately sets out to identify the component factors contributing to psychoticism and to measure these factors separately. The Eysenck Personality Profiler is discussed in chapter six and sets out the measurement of the different component parts of psychoticism.

## **5 Clergy in Three Dimensions**

### **Overview**

This chapter sets out to identify previous empirical research using Eysenck's personality theory amongst those in ministry. The chapter will be broken down into four parts. The first part will review the research undertaken using one of Eysenck's earlier scales, the Eysenck Personality Inventory, the second part will review the research undertaken using the Eysenck Personality Questionnaire, the third part will review the research undertaken using the short form of the Revised Eysenck Personality Questionnaire and the final part will draw together and summarise the chapter.

### ***Eysenck Personality Inventory***

The first of Eysenck's personality scales used amongst those in ministry was the Eysenck Personality Inventory (Eysenck & Eysenck, 1964). Towler and Coxon (1979) used this instrument among clergy training for ministry in the Anglican church. Their data are based on a survey undertaken during the mid 1960s among 76 ordinands attending four theological colleges. The mean scores, which they report on the scales of extraversion and neuroticism are almost identical to the population norms, reported in the test manuals. Clergy in training according to Towler and Coxon do not differ from the general population.

### ***Eysenck Personality Questionnaire***

The Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) has been administered more widely amongst the clergy than the Eysenck Personality Inventory. It has been used to assess the personality profiles of Anglican clergy in training (Francis, 1991), the personality profiles of mid-career Anglican clergy (Francis & Pearson, 1991), the personality profiles of Methodist ministers (Jones & Francis, 1992), the personality profiles of conference going clergy (Francis & Thomas, 1992), the personality profiles of Pentecostal ministers (Francis & Kay, 1995), the personality profiles of Anglican clergy influenced by charismatic experience (Robbins, Hair & Francis, 1999) and the personality profiles of Roman Catholic parochial secular priests (Louden & Francis, 1999).

Francis (1991) administered the Eysenck Personality Questionnaire to 252 Anglican ordinands attending two residential theological colleges and two non-stipendiary ministry-training courses in England. The sample comprised 155 men and 97 women; 27% were in their twenties, 26% in their thirties, 32% in their forties, and 15% in their fifties. The mean age of the sample falls within the 30-39 year age band. The results show that, in relation to the population norms male ordinands record lower scores on the lie scale, comparable psychoticism scores, comparable neuroticism scores and lower scores on the extraversion scale.

As far as female ordinands are concerned, they record lower lie scores, comparable or slightly elevated psychoticism scores, higher scores on the extraversion scale and

significantly lower scores on the neuroticism scale when compared with the population norms. In summary, according to this study of Anglican ordinands, men and women preparing for ministry in the Church of England do not display the personality characteristics predicted from what is known about the relationship between personality and religion in the general population. In other words, the ordinands do not emerge as typical of religious people in general.

Francis and Pearson (1991) reported the findings of an investigation into the personality characteristics of mid-career male Anglican clergy. During the mid 1980s 40 male Anglican clergy completed the Eysenck Personality Questionnaire as part of an assessment programme. The mean age of the sample was 46.7 years with an age range from 36 to 59 years. The mean scores which they report on the scales of extraversion and psychoticism are very close to the population norms reported in the test manual, although in this study the clergy record higher scores on the neuroticism scale and considerably lower scores on the lie scale.

Jones and Francis (1992) investigated the personality profiles of Methodist ministers and administered the Eysenck Personality Questionnaire to 39 male Methodist clergy working within two English districts. The results show that while their neuroticism scores were not significantly different from the test norms for men of the same age group, the extraversion scores were significantly lower than the test norms for men of the same age group. These findings confirm the view that male clergy in England tend to be more introverted than men in general.

Francis and Thomas (1992) investigated the personality profiles of conference going clergy in England. The Eysenck Personality Questionnaire was completed by 40 male clergy, both Anglicans and Methodists, who attended a residential training conference in England. The results show that neither the neuroticism scores nor the extraversion scores were significantly different from the test scores for men of the same age group.

Francis and Kay (1995) investigated the personality characteristics of Pentecostal ministry candidates using the Eysenck Personality Questionnaire. The questionnaire was completed by 364 Pentecostal ministry candidates attending the Elim and the Assemblies of God seminaries in England. The sample comprised 259 men and 105 women: 9.1% were under the age of 20, 54.1% were in their 20s, 25.3% were in their 30s, 9.6% in their 40s and 1.9% in their 50s or 60s. The results reveal that male Pentecostal ministry candidates are neither more nor less extraverted than men in the general population. They do, however, score significantly lower on the psychoticism scale than men in general, significantly lower on the neuroticism scale than men in general and significantly higher on the lie scale than men in general. Female Pentecostal ministry candidates are neither more nor less extraverted than women in general and neither more nor less tough-minded than women in general. Similarly they do not differ from women in general regarding their location on the lie scale. They do, however, score significantly lower on the neuroticism scale than women in general. The reliability of the scales in terms of alpha coefficient were extraversion .86, neuroticism, .85 and psychoticism .44.

Robbins, Hair and Francis (1999) administered the Eysenck Personality Questionnaire

and a 15 item scale developed by Francis and Thomas (1997) to measure the influence of charismatic experience in order to assess personality and attraction to the charismatic movement. The sample consisted of 172 Anglican clergy. The results showed no relationship between psychoticism and charismatic experience, and no relationship between neuroticism and charismatic experience. There is however, a significant positive relationship between extraversion and charismatic experience ( $p < .01$ ). The alpha coefficients for the scales were .85 for extraversion, .87 for neuroticism and .46 for psychoticism.

Louden and Francis (1999) administered the Eysenck Personality Questionnaire to 1,168 Roman Catholic parochial secular priests in England and Wales. The results showed that Roman Catholic parochial secular priests are significantly less extraverted than men in general ( $p < .001$ ). They show slightly higher neuroticism scores than men in general ( $p < .01$ ) and have higher psychoticism scores ( $p < .001$ ) showing themselves to have greater toughmindedness than men in general. The alpha coefficient of the scales were extraversion .84, neuroticism .88 and psychoticism .80 showing that the scales were reliable.

### ***The Revised Eysenck Personality Questionnaire short form***

The short form of the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck & Barrett, 1985) has been used to assess the difference in personality between men and women in ministry (Francis, 1992); the personality profiles of stipendiary Anglican clergy working in the Diocese of Lincoln (Francis & Rodger, 1994a); the influence of

personality on clergy role prioritisation and a number of other factors (Francis & Rodger, 1994b); the different personality profiles of women in stipendiary ministry and non-stipendiary ministry (Francis & Robbins, 1996); to investigate mystical orientation and personality (Francis & Thomas, 1996a); the femininity of Anglo catholic priests (Francis & Thomas, 1996b); personality and gender differences (Robbins, Francis & Rutledge, 1997); the stability of charismatic ministers (Francis & Thomas, 1997); the personality profiles of rural Anglican ministers (Francis & Lankshear, 1998); the personality profiles of stipendiary Anglican clergy and job satisfaction (Francis & Robbins, 1999) and the personality profile of Methodist ministers (Robbins, Francis, Haley & Kay, 2001).

Eysenck's personality theory has been used among female clergy to see how their personality profile compared with their male colleagues. Francis (1992) administered the short form of the Revised Eysenck Personality Questionnaire, to all clergy attending specific sessions at two resident clergy schools. The sample comprised 92 male clergy and 20 female clergy; four of the respondents were in their twenties, 32 in their thirties, 36 in their forties, 30 in their fifties and 10 in their sixties. The results showed that, contrary to the usual sex differences in personality profile found in general population samples, the female clergy recorded higher extraversion and higher psychoticism scores than the male clergy, but did not record higher neuroticism scores than the male clergy. The reliability of the scales in terms of alpha coefficient were extraversion .87, neuroticism .83 and psychoticism .48.

Francis and Rodger (1994a) invited all the full-time stipendiary clergy working within the

Diocese of Lincoln to participate in a study on the personality profile of Anglican clergymen. All told 170 male clergy responded to the invitation, which resulted in a response rate of 76%. The respondents included 33 men in their 30s, 47 in their 40s, 56 in their 50s, 33 in their 60s and one in their 70s. The instrument administered was the short form of the Revised Eysenck Personality Questionnaire. In terms of extraversion the results describe a group of men who enjoy meeting new people (89%) and mixing with people (87%). When with people half of them (49%) do not regard themselves as talkative and two-fifths (39%) consider themselves to be mostly quiet in company. Half of them (52%) admit to keeping in the background on social occasions and three-fifths (59%) feel that they are not the kind of people to get a party going. While professionally at home in social gatherings, a number of clergy clearly display introverted characteristics.

The neuroticism items demonstrate that only about one in six of the male clergy would describe themselves as a nervous person (17%), as someone who suffers from nerves (17%) or as highly-strung (18%). One-in-three (32%) describes himself as an irritable person. Two-fifths often feel fed up (39%) or miserable for no good reason (41%). Half (52%) describe themselves as worriers and nearly two-thirds (63%) find that their feelings are easily hurt. While the majority of male clergy emerge as basically stable, many of them are sensitive individuals who are susceptible to the pressures of their professional experiences.

The psychoticism items describe a group of men who try not to be rude to people (93%),

to whom good manners and cleanliness matter (90%) and who enjoy cooperating with others (86%). They are men who would worry if they were in debt (92%) or if they knew there were mistakes in their work (85%). Very few would risk taking drugs which may have strange or dangerous effects (3%). Only 3% would like people to be afraid of them. Only 1% think marriage is old fashioned or should be done away. Half of them, however, prefer to go their own way rather than act by the rules (53%). While the vast majority of male clergy emerge as basically gentle and tenderminded men, a significant proportion of them are toughminded enough to reject social convention when it seems appropriate.

The lie scale items describe a group of men who recognise that they are far from perfect in many ways: 88% admit to having said bad or nasty things about people; 85% recognise that they sometimes put off until tomorrow what they ought to do today, 80% confess to having broken or lost something belonging to someone else; 75% know that they do not always practice what they preach. On the other hand, many of them claim that they successfully maintain high ethical standards of interpersonal relationships. Thus, nearly three-quarters (72%) claim that, when they say they will do something, they always keep their promise no matter how inconvenient it might be.

Francis and Rodger (1994b) investigated the influence of personality on clergy role prioritization, role influences, conflict and dissatisfaction with ministry. They used the same data as Francis and Rodger (1994a). The results of this investigation reveal that Eysenck's three major dimensions of personality (extraversion, neuroticism, and psychoticism) are able to account for significant individual differences in all three key

areas of ministry performance and assessment. In particular it is those clergy who score high on neuroticism and high on psychoticism who show most signs of dissatisfaction with ministry and are most likely to entertain thoughts of seeking alternative forms of employment.

One of the problems of using the short form of the Revised Eysenck Personality Questionnaire, is that there are no secure published population norms against which the clergy personality profiles may be assessed and so this paper cannot give us a profile of clergy personality which is comparable with the population in general. The reliability of the scale in terms of alpha coefficients is extraversion .81, neuroticism, .76, psychoticism, .54.

Francis and Robbins (1996) have used the short form of the Revised Eysenck Personality Questionnaire among female stipendiary and non-stipendiary Anglican parochial clergy in Britain in order to assess the different personality characteristics that these two types of ministry display. A detailed questionnaire was mailed to all women clergy identified by the Church Commissioners' database as residing in England, Scotland, Wales and Ireland. A total of 1,735 questionnaires were sent and 1,229 usable responses were returned. The questionnaire asked the respondents to characterise their primary focus for ministry. In this paper the results are based on those who are in stipendiary parochial ministry, and non-stipendiary parochial ministry. There were 556 women who characterised their ministry as stipendiary parochial and 321 women who characterised their ministry as non-stipendiary parochial. The results show that there are no significant

differences between stipendiary and non-stipendiary female clergy on the dimensions of extraversion and neuroticism. There are, however, significant differences between the two groups on the dimension of psychoticism and on the lie scale. Non-stipendiary women clergy record significantly lower scores on the psychoticism scale and significantly higher scores on the lie scale. The reliability of the scales are extraversion .84, neuroticism .78, and psychoticism, .46 .

Francis and Thomas (1996a) used the short form of the Revised Eysenck Personality Questionnaire to investigate mystical orientation and personality among Anglican clergy. A sample of 222 male clergy completed the short form of Revised Eysenck Personality Questionnaire and an index of mystical orientation. The data demonstrate a positive correlation between mystical orientation and extraversion, but no relationship between mystical orientation and either neuroticism or psychoticism. The three scales of the short form of the Revised Eysenck Personality Questionnaire demonstrate satisfactory alpha coefficients, extraversion .88, neuroticism, .84 and psychoticism .51.

Francis and Thomas (1996b) looked at the question 'Are Anglo Catholic priests more feminine?' They used a random sample of 222 male clergy from within the Church in Wales. These clergy completed the short form of the Revised Eysenck Personality Questionnaire. They also completed a 54 item questionnaire concerned with different aspects of religious experience including a nine item index of Anglo Catholic orientation. The results demonstrate no relationship between the Anglo Catholic orientation and personality. Male Anglican clergy who prefer the Anglo Catholic orientation score

neither higher nor lower than their colleagues who do not prefer this orientation on the dimensions of extraversion, neuroticism, psychoticism or the lie scale. The major conclusion to emerge from this study is that the data provide no support for the theory that male Anglo Catholic priests present a more feminine personality profile than other male Anglican priests. The alpha coefficient for these scales was .88 for extraversion, .84 for neuroticism and .51 for psychoticism.

Robbins, Francis and Rutledge (1997) in their paper 'The Personality Characteristics of Anglican stipendiary Parochial Clergy: Gender Differences Revisited' used the short form of the Revised Eysenck Personality Questionnaire. The questionnaire was completed by 373 male and 560 female Anglican stipendiary clergy. The results reveal that while women in general tend to record higher neuroticism scores than men; there is no significant difference in neuroticism scores between male and female clergy. While women in general tend to record higher lie scale scores than men, there is no significant differences in lie scale scores between male and female clergy. While men in general tend to record higher extraversion scores than women there are no significant differences in extraversion scores between male and female clergy. While men in general tend to record higher psychoticism scores than women, there are no significant differences in psychoticism scores between male and female clergy. The reliability of these scales in terms of their alpha coefficients are extraversion .84, neuroticism .80 and psychoticism .50 for men. For women .84 for extraversion, .78 for neuroticism and .48 for psychoticism.

Francis and Thomas (1997) looked at the question 'Are charismatic ministers less stable?' A sample of 222 male clergy within the Church in Wales completed the short form of the Revised Eysenck Personality Questionnaire, together with an index of Charismatic experience. The results show a significant correlation between personality and the charismatic experience. The Anglican clergy who respond to the charismatic experience differ from clergy who do not respond to the charismatic experience on the two dimensions of neuroticism and extraversion. They score higher on extraversion scale and lower on the neuroticism scale. In other words among male Anglican clergy the charismatic experience is associated with stable extraversion. There is no significant relationship between the charismatic experience and psychoticism. In terms of their reliability the scales gave an alpha coefficient of .88 for extraversion, .83 for neuroticism and .50 for psychoticism.

Francis and Lankshear (1998) administered the short form Revised Eysenck Personality Questionnaire to 81 male Anglican clergy in charge of rural benefices. The results show that clergy serving in rural areas record significantly higher scores on the extraversion scale than clergy serving in urban areas and that there are no significant differences between clergy serving in rural and urban areas in terms of scores recorded on the neuroticism scale or the psychoticism scale.

Francis and Robbins (1999) administered the short form Revised Eysenck Personality Questionnaire together with indices of satisfaction with ministry and of dissatisfaction with ministry to a sample of 565 female stipendiary Anglican clergy in the United Kingdom. The results reveal that the majority of female stipendiary clergy are either very

satisfied (45%) or satisfied (43%) with their present ministry. Only 9% were dissatisfied and only 3% very dissatisfied. The data also demonstrated that there was a significant positive correlation between extraversion and satisfaction with present appointment ( $p < .01$ ) and a significant negative correlation between neuroticism and satisfaction with present appointment ( $p < .05$ ). Demonstrating that neuroticism and extraversion are both significant predictors of current satisfaction with ministry. The short form of the Revised Eysenck Personality Questionnaire demonstrated the following alpha reliability coefficients, extraversion .84, neuroticism, .79 and psychoticism .49.

Robbins, Francis, Haley and Kay (2001) administered the short form of the Revised Eysenck Personality Questionnaire to 1,339 Methodist ministers. The results showed that Methodist ministers scored significantly lower psychoticism scores ( $p < .001$ ) than men in the general population. There was no difference between Methodist Ministers and the population norms in terms of extraversion and neuroticism. The female ministers recorded significantly lower neuroticism scores ( $p < .001$ ), significantly lower psychoticism scores ( $p < .01$ ) than women in general, but did not differ from the population norms in terms of scores recorded on the extraversion scale. The three scales of the short form of the Revised Eysenck Personality Questionnaire achieved the following alpha coefficients extraversion .85, neuroticism, .81 and psychoticism .63.

### ***Summary***

This chapter has set out to review the research already undertaken using Eysenck's theory of personality and the higher order factors of neuroticism, extraversion and psychoticism.

It becomes clear from reviewing the literature that it is difficult to know what is being measured when using the higher order factors and as a consequence what the association is between the higher order factor and the clergy. As has already been seen the different instruments that have been used to measure personality have changed as Eysenck and his associates have developed the various instruments. Consequently the measurement of personality using the Eysenck Personality Inventory will be different from the measurement of personality using the short form of the Revised Eysenck Personality Questionnaire as the questions included in the Eysenck Personality Inventory have developed and changed over time and so what was being measured in 1976 will be different from what is being measured in the year 2001. The same higher order factor of neuroticism, extraversion or psychoticism may be being measured but what makes up those higher order factors will be different.

The Eysenck Personality Profiler will hopefully correct this as what is being measured in terms of the higher order factor will be broken down into component parts and so it will be clearer what component part of the higher order factor is relating to and so a more comprehensive picture of the cleric will emerge.

# 6 The EPP

## Overview

Having investigated the development and theory of Eysenck's higher order factors of neuroticism, extraversion and psychoticism, attention is now given to the development of the Eysenck Personality Profiler (Eysenck, Barrett, Wilson & Jackson, 1992). The Eysenck Personality Profiler retains the higher order factors of neuroticism, extraversion and psychoticism but develops each of these higher order factors into different component parts. These component parts make up the higher order factor and make it easier for the researcher to see what is being measured.

The chapter will be subdivided into 7 parts, a short introduction to the Eysenck Personality Profiler will be followed by three sections which give attention to the higher order factors of neuroticism, extraversion and psychoticism alongside the components that make up the higher order factor. Then the psychometric properties of the Eysenck Personality Profiler will be investigated, followed by a review of the research already undertaken using the Eysenck Personality Profiler. The last part will give a conclusion or summary of the findings.

### *Introducing the Eysenck Personality Profiler*

The Eysenck Personality Profiler (EPP, Eysenck, Barrett, Wilson & Jackson, 1992) has

its roots in the scale produced by Eysenck and Wilson in their book *Know your Own Personality* (1976). The Eysenck Personality Profiler has 21 scales of 20 items each whilst Eysenck and Wilson (1976) has 21 scales of 30 items each.

Eysenck and Wilson (1976) describe the scale in terms of three major typologies of temperament. Each of these typologies will be dealt with in detail beginning with neuroticism, emotional instability followed by extraversion-introversion, and finally by psychoticism, toughmindedness-tendermindedness

### ***Neuroticism***

One of the three major typologies of temperament described by Eysenck and Wilson (1976) is concerned with the general area of emotional instability versus adjustment, sometimes called neuroticism. This typology of temperament can be broken down into at least seven component characteristics or sub-factors. They are self-esteem, happiness, anxiety, obsessiveness, autonomy, hypochondriasis and guilt. Thirty questions make up each of the sub-factors.

Eysenck and Wilson describe people who score high on self-esteem as those tending to have plenty of confidence in themselves and their abilities. They think of themselves as worthy, useful human beings, and believe that they are well liked by other people. Without necessarily implying cockiness or conceit it could be said that they like themselves a lot. Low scorers have a low opinion of themselves, believing that they are

unattractive failures. An extreme low score may be thought of as approximating to the celebrated 'inferiority complex'.

High scorers on the happiness sub-factor are generally cheerful, optimistic and well. They are satisfied with their existence, find life rewarding, and are at peace with the world. Low scorers are characteristically pessimistic, gloomy and depressed, disappointed with their existence and at odds with the world.

High scorers on the anxiety sub-factor are people who are easily upset by things that go wrong and are inclined to worry unnecessarily about things that may or may not happen. Such people account for a high proportion of the consumption of minor tranquillisers like Librium and Valium. Low scorers are placid, serene and resistant to irrational fears and anxieties.

High scorers on the obsessiveness sub-factor are careful, conscientious, highly disciplined, staid, finicky, and easily irritated by things that are unclean, untidy or out of place. Low scorers are casual and easy-going, with less need for order, routine or ritual. Again, the questions are selected to cover a normal range, so the scale cannot really be used to diagnose an obsessive-compulsive neurosis.

High scorers on the autonomous sub-factor enjoy a great deal of freedom and independence, they make their own decisions, view themselves as master of their own fate and take realistic action to solve their problems. The low scorer lacks self-reliance,

thinks of themselves as a helpless pawn of fate, is pushed around by other people and events, and shows a high degree of what has been called 'authoritarian submission' - the unquestioning obedience to institutional power.

High scorers on the hypochondriasis sub-factor are people who have a tendency to acquire psychosomatic symptoms and imagine that they are ill. High scorers complain of a wide variety of diffuse physical symptoms, show a great deal of concern about their state of health, and frequently demand the sympathetic attention of their doctor and their family and friends. Low scorers are very seldom ill and do not worry very much about their health. It is just possible that an individual who is genuinely very sick physically could obtain a high score on this scale, but the variety of symptoms sampled makes this extremely unlikely.

High scorers on the guilt sub-factor are self-blaming, self-abasing and troubled by their conscience regardless of whether or not their behaviour is really morally reprehensible. Low scorers are little inclined to punish themselves or regret their past behaviour. A certain level of guilt may be appropriate for some people (indeed its complete absence is symptomatic of psychopathy) but excessive self-recrimination is usually regarded as a neurotic characteristic.

### ***Extraversion***

The second typology is extraversion-introversion and in the words of Eysenck and Wilson 'this typology of temperament can be broken down into at least seven component

characteristics or sub-factors.’ These sub-factors are activity, sociability, risk-taking, impulsiveness, expressiveness, reflectiveness and responsibility. A set of 30 questions makes up each of these sub-factors. Eysenck and Wilson (1976) give a description of each the sub-factors in detail.

People scoring high on the activity factor are generally active and energetic. They enjoy all kinds of physical activity including hard work and exercise. They tend to wake early and quickly in the morning, move rapidly from one activity to another, and pursue a wide variety of different interests. People with low scores on this scale are inclined to be physically inactive, lethargic and easily tired. They move about the world at a leisurely pace and prefer quiet, restful holidays.

High scorers on the sociability sub-factor seek out the company of other people, they like social functions such as parties and dances, they meet people easily and are generally happy and comfortable in social situations. Low scorers, by contrast prefer to have only a few special friends, enjoy solo activities such as reading, having difficulty finding things to talk about to other people, and are inclined to withdraw from oppressive social contacts.

High scorers on the risk-taking sub-factor like to live dangerously and seek rewards with little concern for the possible adverse consequences. Characteristically, they are gamblers who believe that ‘an element of risk adds spice to life.’ Low scores indicate a preference for familiarity, safety and security, even if this means sacrificing some degree of

excitement in life.

High scorers on the impulsiveness sub-factor are inclined to act on the spur of the moment, make hurried, often premature, decisions, and are usually carefree, changeable and unpredictable. Low scorers consider matters very carefully before making a decision. They are systematic, orderly, cautious, and plan their life out in advance; they think before they speak, and 'look before they leap'.

The sub factor of expressiveness refers to a general tendency to display one's emotion outwardly and openly, whether sorrow, anger, fear, love or hate. High scorers tend to be sentimental, sympathetic, volatile and demonstrative; low scorers are reserved, even-tempered, cool, detached, and generally controlled as regards the expression of their thoughts and feelings. This factor, taken to extreme, refers to behaviour that is classically called 'hysterical', therefore it will come as no surprise to learn that, even though it is primarily a component of extraversion, it is also tilted slightly in the direction of emotional instability.

High scorers on the reflectiveness scale are inclined to be interested in ideas, abstractions, philosophical questions, discussions, speculations and knowledge 'for the sake of knowledge'; that is, they are generally thoughtful (in the literal sense of the term) and introspective. Low scorers have a practical bent, are interested in doing things rather than thinking about them, and tend to be impatient with 'ivory tower' theorising.

People who score high on the responsibility sub-factor are likely to be conscientious, reliable, trustworthy and serious-minded, possibly even a bit compulsive. Low scorers, by contrast, are inclined to be casual, careless of protocol, late with commitments, unpredictable, and perhaps socially irresponsible. All this is within the normal range, however, so no implication of psychopathy or delinquency is intended even for rock bottom scores. While it may be true to say that psychopaths and criminals are generally irresponsible the converse is by no means certain; many people are low on this factor without having the slightest criminal inclination.

### ***Psychoticism***

The third of the three major typologies of temperament described by Eysenck and Wilson is toughmindedness–tendermindedness. This typology of temperament can be broken down into at least seven component characteristics or sub-factors. They are aggressiveness, assertiveness, achievement orientation, manipulation, sensation-seeking, dogmatism and masculinity-femininity. These sub-factors consist of 30 questions.

High scorers on the aggressiveness sub-factor are given to the direct or indirect expression of aggression, for example, through behaviours such as temper tantrums, fighting, violent argument and sarcasm. They take no nonsense from anyone and feel compelled to return fire or ‘get back’ at anyone who transgresses against them. Low scorers are gentle, even-tempered, prefer to avoid personal conflict, and are not given to violence either physical or indirect.

High scorers on the assertiveness sub-factor have what is sometimes called a 'strong personality'; they are independent, dominant, and stand up for their rights, perhaps to the extent of being viewed as 'pushy'. Low scorers are humble, timid, submissive, disinclined to take any initiative in an interpersonal situation, and may be easily imposed upon.

High scorers on the achievement orientation sub-factor are ambitious, hard working, competitive, keen to improve their social standing, and place a high value on productivity and creativity. Low scorers place little value on competitive performance or creative output. Many are also apathetic, retiring and aimless, but these are not invariable characteristics of the person without strong achievement motivation.

High scorers on the manipulation sub-factor are detached, calculating, shrewd, worldly, expedient, and self-interested in their dealings with other people. Low scorers are warm-hearted, trusting, empathetic, straightforward and altruistic, perhaps also a little naive and gullible. This trait is sometimes called Machiavellianism because it corresponds to some extent with the political philosophy expounded by the Italian writer Niccolo Machiavelli.

High scorers on the sensation seeking sub-factor are forever seeking thrills in life; they have an insatiable thirst for novel experiences and require regular 'jags' in order to stave off the boredom. To this end they will accept a moderate level of danger to life and limb. Low scorers have little need for excitement or adventure; instead they prefer the secure and familiar comforts of 'home'.

High scorers on the dogmatism sub-factor have set, uncompromising views on most matters, and they are likely to defend them vigorously and vociferously. Low scorers are less rigid and less likely to see things in black and white; they are open to rational persuasion and very tolerant of uncertainty.

People scoring high on the masculinity-femininity sub-factor are unconcerned about crawling insects, the sight of blood and other gruesome spectacles; they are tolerant of - and probably enjoy - violence, obscenity and swearing; they are disinclined to show weakness or sentimentality of any kind, for example by crying or expressing love, and rely on reason rather than intuition. Low scorers are easily upset by bugs, blood, brutality, etcetera, and have a high interest in delicate matters such as romance, children, fine arts, flowers and clothes.

### ***Psychometric properties of the Eysenck Personality Profiler***

In 1992 Eysenck, Barrett, Wilson and Jackson published a paper 'Primary trait measurement of the 21 components of the P-E-N system.' The purpose of the paper was to assess the reliability and intercorrelations of the 21 traits proposed by Eysenck and Wilson in 1976 and to give some psychometric information about the traits.

As a preliminary study, 150 males and 81 females completed a questionnaire and the results were correlated and factor analysed. The findings generally support the expectations of the authors. There are three uncorrelated factors; scales are reliable; sex

differences are as expected—women feel inferior, depressed, anxious, and dependent, which agrees with the higher neuroticism of women often observed in previous research. Men are more risk-taking, irresponsible, sensation-seeking, and masculine, all in agreement with previous research and the higher psychoticism score of men.

Eysenck, Barrett, Wilson and Jackson (1992) go on to suggest that the large number of items was inconvenient and would be unacceptable to most potential subjects, so each scale was reduced from 30 items to 20 items. This was done by calculating item-scale correlation and eliminating items with the lowest item-scale correlations. Occasionally items with reasonable item correlations were eliminated if the item had higher correlations with scales other than the one for which it was scored. As a consequence there is a new set of scales of 20 items each. Elimination of the worst 10 items from the scale had not lowered the alpha reliabilities of the scales, but has raised it from an average of .73 to an average of .77.

A further study was carried out to assess the means and standard deviations of the 21 scales of neuroticism, extraversion and psychoticism among 982 men and 542 women. The results show satisfactory mean and standard deviation scores and also that males are high on psychoticism and females on neuroticism.

A much larger sample was used in a study of factor analysis; data were obtained from 1,019 males and 580 females. The results show a clear cluster of neuroticism scales, which include dependent, inferior, unhappy, anxious, guilt-ridden, and hypochondriacal.

There is also a clear cluster of extraversion scales, which include sociable, active, assertive, and ambitious. There is, however, a less dense cluster of psychoticism scales which include, risk-taking, manipulative, sensation-seeking, aggressive, impulsive and irresponsible with dogmatic and expressive close by.

Table 6.1 Alpha coefficients for the total sample of 1,599 males and females.

	Males	Females
Activity	.754	.769
Sociable	.815	.812
Expressive	.602	.600
Assertive	.744	.767
Ambitious	.796	.800
Dogmatic	.560	.600
Aggressive	.700	.669
Inferiority	.846	.849
Unhappy	.849	.893
Anxiety	.829	.848
Dependence	.745	.765
Hypochondriacal	.748	.691
Guilt	.813	.790
Obsessive	.710	.690
Risk-taking	.688	.676
Impulsive	.753	.752
Irresponsible	.760	.681
Manipulative	.650	.630
Sensation-seeking	.748	.761
Tough-minded	.557	.409
Practical	.732	.767

There are eight psychoticism scales forming a much less obvious cluster, and the results show that risk-taking, manipulation and sensation seeking could be judged to be as close to the extraversion cluster as impulsive, aggressive and the expressive scales. In summary, the results show that not all scales are loading on a single factor but load on two or even three factors. The alpha coefficients for the total sample of 1,599 males and females are set out in table 6.1. Alpha reliabilities are acceptable for the great majority of the scales, but expressiveness, dogmatism, manipulative and toughminded have reliabilities below the .70 level with risk-taking only just below the level.

Eysenck, Barrett, Wilson and Jackson's (1992) paper have renamed and restructured some of the 21 scales with the only explanation from them being that they have renamed the scales to make them more acceptable, but add without changing their nature.

The Emotional Instability – Adjustment (Neuroticism) cluster of scales now consist of:

- |                   |         |                                |   |
|-------------------|---------|--------------------------------|---|
| • Self - esteem   | renamed | Inferiority / Self-esteem      | N |
| • Happiness       | renamed | Unhappy / Happy                | N |
| • Anxiety         | renamed | Anxious / Calm                 | N |
| • obsessiveness   | renamed | Obsessive/ Casual              | N |
| • Autonomy        | renamed | Dependence / Autonomy          | N |
| • Hypochondriasis | renamed | Hypochondria / Sense of health | N |
| • Guilt           | renamed | Guilt / Guilt Freedom          | N |

The emotional instability-adjustment cluster of scales remains the same.

The Extraversion-Introversion cluster of scales now consists of:

- |               |         |                       |   |
|---------------|---------|-----------------------|---|
| • Activity    | renamed | Active / Inactive     | E |
| • Sociability | renamed | Sociable / Unsociable | E |

- Expressiveness                      renamed                      Expressive / Inhibited                      E
- Assertiveness                      renamed                      Assertive / Submissive                      P
- Achievement Orientation                      renamed                      Ambitious / Unambitious                      P
- Dogmatism                      renamed                      Dogmatic / Flexible                      P
- Aggressiveness                      renamed                      Aggressive / Peaceful                      P

The last four scales have been moved into extraversion from the old psychoticism scale of Eysenck and Wilson (1976).

The Toughmindedness-Tendermindedness (Psychoticism) cluster of scales scale now consist of:

- Risk Taking                      renamed                      Risk Taking / Careful                      E
- Impulsiveness                      renamed                      Impulsive / Controlled                      E
- Responsibility                      renamed                      Irresponsible / Responsible                      E
- Manipulation                      renamed                      Manipulation / Empathy                      P
- Sensation Seeking                      renamed                      sensation seeking / Unadventurous                      P
- Masculinity                      renamed                      Tough-minded / Tender minded                      P
- Reflectiveness                      renamed                      Practical / Reflective                      E

The psychoticism cluster of scales now has four scales from the extraversion-introversion cluster.

Normative data for the 21 personality scales of the Eysenck Personality Profiler have been calculated by Eysenck, Wilson and Jackson (1999) on the basis of the responses of 697 men and 697 women and are set out in table 6.2.

The following three conclusions emerge from these data. First, it is clear that women record higher scores than men on all of the seven personality traits associated with the

dimension of neuroticism. Women emerge as displaying lower levels of self-esteem, happiness and autonomy. Women emerge as displaying higher levels of anxiety, hypochondriasis, guilt and obsessiveness.

Table 6.2 EPP norms for men and women

Personality trait	male		female		t	p<
	mean	sd	mean	sd		
<b><i>Extraversion</i></b>						
Activity	26.91	7.21	26.54	7.43	0.94	NS
Sociability	27.74	8.02	27.01	7.94	1.71	.05
Expressiveness	17.21	6.05	18.74	6.22	4.66	.001
Assertiveness	24.32	6.90	22.41	7.38	4.99	.001
Achievement orientation	22.76	7.82	21.03	8.01	4.08	.001
Dogmatism	15.02	5.61	14.02	5.57	3.34	.001
Aggressiveness	14.22	6.72	12.00	6.36	6.33	.001
<b><i>Neuroticism</i></b>						
Low self-esteem	8.76	7.69	12.06	9.11	7.31	.001
Unhappiness	7.51	7.81	9.31	8.92	4.01	.001
Anxiety	9.85	7.87	13.45	8.94	7.98	.001
Dependency	7.87	5.99	9.59	6.83	5.00	.001
Hypochondriasis	3.70	4.51	4.41	4.74	2.87	.01
Guilt	7.79	6.84	8.65	7.05	2.31	.05
Obsessiveness	12.04	6.57	12.90	6.41	2.47	.01
<b><i>Psychoticism</i></b>						
Risk taking	21.81	6.70	20.18	6.66	4.56	.001
Impulsiveness	18.61	7.45	20.15	7.52	3.84	.001
Irresponsibility	17.56	7.39	17.38	6.72	0.48	NS
Manipulation	18.11	6.84	14.82	5.91	9.61	.001
Sensation seeking	24.09	6.92	19.66	7.76	11.26	.001
Masculinity	25.07	5.57	13.58	5.05	40.35	.001
Unreflectiveness	20.28	7.27	18.85	7.63	3.58	.001
Lie scale	11.49	6.73	12.75	6.61	3.53	.001

Second, it is clear that men record higher scores than women on five of the seven personality traits associated with the dimension of psychoticism. Men emerge as displaying higher levels of risk taking, manipulation, sensation seeking, and masculinity. Men emerge as displaying lower levels of reflectiveness. On the other hand, there is no significant difference between the scores of men and women on responsibility. Contrary to the general pattern women record higher levels than men on impulsiveness.

Third, it is clear than men record higher scores than women on five of the seven personality traits associated with the dimension of extraversion. Men emerge as displaying higher levels of sociability, assertiveness, achievement orientation, dogmatism and aggressiveness. On the other hand, there is no significant difference between scores of men and women on activity. Contrary to the general pattern women record higher scores than men on expressiveness.

Muris, Schmidt, Merckelbach and Rassin (2000) examined the reliability, factor structure and convergent validity of the Dutch translation of the Eysenck Personality Profiler in a sample of 215 introductory psychology students. The alpha coefficients for the total sample are set out in table 6.3.

The results showed first that the internal consistency as measured by Cronbach's alpha coefficient of most of the scales were adequate. There were however, three scales that fall below the acceptable level of .60, they are expressiveness (.46) dogmatism (.48) and aggressiveness (.54). Second, exploratory and confirmatory factor analysis showed that

the predicted three-factor structure provided a reasonable 'fit' for Eysencks' Personality Profile data.

Table 6.3 alpha coefficients for the various scales of the Eysenck Personality Profiler from Muris, Schmidt, Merkelbach and Rassin (2000)

	$\alpha$
<b><i>Extraversion</i></b>	
Activity	.74
Sociability	.75
Expressiveness	.46
Assertiveness	.76
Ambition	.72
Dogmatism	.48
Aggressiveness	.54
<b><i>Neuroticism</i></b>	
Inferiority	.87
Unhappiness	.88
Anxiety	.80
Dependency	.71
Hypochondriasis	.74
Guilt	.76
Obsessiveness	.66
<b><i>Psychoticism</i></b>	
Risk taking	.69
Impulsiveness	.76
Irresponsibility	.68
Manipulation	.60
Sensation seeking	.74
Toughminded	.60
Practical	.74
 Lie scale	 .70

Table 6.4 alpha coefficients for the three studies reported in Jackson, Furnham, Forde and Cotter (2000).

Study	Alpha a	Alpha b	Alpha c
<i>Extraversion</i>			
Activity	.71	.76	.83
Sociability	.78	.81	.84
Expressiveness	.58	.60	.50
Assertiveness	.74	.75	.76
Ambition	.77	.80	.82
Dogmatism	.58	.58	.56
Aggressiveness	.64	.70	.69
<i>Neuroticism</i>			
Inferiority	.83	.84	.83
Unhappiness	.83	.86	.87
Anxiety	.80	.84	.83
Dependency	.73	.75	.63
Hypochondriasis	.79	.72	.66
Guilt	.78	.80	.79
Obsessiveness	.72	.70	.71
<i>Psychoticism</i>			
Risk taking	.66	.68	.71
Impulsiveness	.75	.75	.79
Irresponsibility	.67	.72	.72
Manipulation	.62	.64	.60
Sensation seeking	.74	.75	.81
Toughminded	.70	.48	.70
Practical	.71	.75	.75
<i>Lie scale</i>	.77		

Study a = this study, n = 655

Study b = Eysenck, Barrett, Wilson and Jackson (1992), n = 1524

Study c = Costa and McCrae (1995), n= 299

Jackson, Furnham, Forde and Cotter (2000) administered the Eysenck Personality Profiler to 655 people who were tested as part of a selection and development programme in their organisation in order to investigate the structure of the of the Eysenck Personality Profiler. They also compare their findings with those of the findings of Eysenck, Barrett, Wilson and Jackson (1992) and Costa and McCrae (1995). The results of all three studies are set out in table 6.4

Across these studies there is a high consistency in quoted alpha. All three studies show that expressiveness, dogmatism, and manipulativeness has alphas less than .7. Risk-taking has an alpha less than .7 in studies a and b; dependence and hypochondriasis, has an alpha less than .7 in study c, irresponsibility has an alpha less than .7 in study a, and toughmindedness has an alpha less than .7 in study b. All the other primary scales have alphas of .7 or greater across all three studies. Little evidence was found to support Costa and McCrae's (1995) comment that a five-factor solution fitted the data well.

### ***Using the EPP***

The EPP has been used by a number of researchers to investigate personality and stress in performing artists (Maechant-Haycox & Wilson, 1992), personality and bikers (Jackson & Wilson, 1993), personality of physicists (Wilson & Jackson, 1994), personality and different occupational groups (Jackson and Wilson, 1994), personality and test taking styles (Furnham, Forde & Cotter, 1998a), personality and intelligence (Furnham, Forde & Cotter, 1998b), personality and performance at work (Jackson & Corr, 1998; Furnham, Forde & Ferrari, 1999) and the relationship between indecisiveness and neuroticism (Jackson, Furnham & Lawty-Jones, 1999).

Marchant-Haycox and Wilson (1992) administered the Eysenck Personality Profiler and a stress symptom checklist to 162 performing artists (33 actors, 26 dancers, 65 musicians and 38 singers) and scores were compared against test norms and a control group. The results show that musicians are the most cynical, resigned and world-weary group, being inactive, unsociable, submissive, unambitious and controlled, as well as low in adventurousness. They were, however, the most empathetic group tested. Actors produced high scores on expressiveness, dogmatism, aggressiveness, impulsiveness, irresponsibility, guilt and reflectiveness. Thus they tended to be extraverted. Actors were not only noticeably more risk taking, sensation seeking and ambitious than other performers, but in each case their mean scores were beyond that of the controls. Singers were a less distinctive group as they fell between actors on the one hand and musicians/dancers on the other. The only trait on which they were outside the range of the other performing artist groups was that of sensation seeking.

Jackson and Wilson (1993) use the Eysenck Personality Profiler in their study on the personality of bikers. The sample consisted of 22 male bikers and 7 female bikers. The results show that male bikers are distinguished from the normal population on the following traits: they are less ambitious ( $p < .001$ ), less responsible ( $p < .01$ ), lower in self-esteem ( $p < .01$ ), more sensation seeking ( $p < .01$ ), more aggressive ( $p < .01$ ), more tough minded ( $p < .02$ ), more dogmatic ( $p < .02$ ), more risk taking ( $p < .05$ ), more impulsive ( $p < .05$ ) and generally more adventurous ( $p < .05$ ). The lack of ambitiousness among male bikers was also replicated in the female sample, their mean of 30.33 being significantly different from the female norm of 19.21 ( $p < .01$ ).

Some internal comparisons within the biker sample were also made, even though the numbers in the subdivided samples were so small that only the most striking differences would be statistically significant. When bikers were split on the basis of self-declared income into those that were 'respectable' (n=10; earning more than £17,000 per year) and those that were 'skint' (n=5; the unemployed, students or manual workers) 'skint bikers' were found to be more hypochondriacal ( $p<.02$ ), more expressive ( $p<.002$ ), less casual ( $p<.05$ ) and less autonomous ( $p<.05$ ). Divided according to recklessness (fast riding and/or having points on the licence, n=13; vs slow, safe riding, no endorsements and/or pillion passengers, n=16), the more reckless riders were significantly distinguished by scores on toughmindedness ( $p<.05$ ) and a tendency to use the 'can't decide' response category more than twice as frequently ( $p<.05$ ). Toughness was also the only trait to distinguish the 22 men from the 7 women ( $P<.001$ ), female scores being twice as 'tender' as those of men on average (23.33 vs 12.73). According to the authors the results support the construct validity of the Eysenck Personality Profiler.

Wilson and Jackson (1994) used the Eysenck Personality Profiler in their study on the personality of physicists. The Eysenck Personality Profiler was sent to a sample of 600 members of the Institute of Physics with a request that it be completed anonymously and returned by post. The response rate was 40%, 109 males and 133 females. The results show that female physicists are controlled ( $p<.001$ ) careful ( $p<.001$ ), inhibited ( $p<.001$ ), responsible ( $p<.001$ ), unsociable ( $p<.001$ ) and tough ( $p<.001$ ) compared with female norms. Male physicists are characterised as careful ( $p<.001$ ), unsociable ( $p<.001$ ), controlled ( $p<.001$ ), inhibited ( $p<.001$ ), submissive ( $p<.001$ ), and unadventurous

( $p < .001$ ). Wilson and Jackson (1994) claim that both male and female physicists appear as introverted and cautious on the super factors (equivalent to extraversion and psychoticism).

Jackson and Wilson (1994) administered the Eysenck Personality Profiler to a number of occupational groups in order to assess the relationship between group obsessiveness, neuroticism and dissimulation. The results showed that the more obsessive the work group, the more likely the lie scale is to be correlated with neuroticism.

Costa and McCrae (1995) administered the Eysenck Personality Profiler, the Revised Eysenck Personality Questionnaire (Eysenck & Eysenck, 1991) and the Revised NEO Personality Inventory (NEO-PI-R, Costa & McCrae, 1992) to 229 adults. The results showed when correlating the EPP with age, gender, and years of education, the older participants scored significantly higher on obsessive and lower on activity, expressiveness, aggressiveness, anxiety, risk taking, impulsiveness, irresponsibility, manipulation, and sensation seeking scales, but all the correlations were modest ranging from .15 to .31. Men scored higher than women on dogmatism, aggressiveness, risk taking, manipulation, sensation seeking, tough-minded, and practical scales whereas women scored higher than men on inferior and hypochondriacal scales. These correlations for all but one scale were small ranging from .19 to .30. The highest correlation was for the tough-minded scale, which was .72. None of the Eysenck Personality Profiler scales were significantly related to years of education.

Correlation of Eysenck Personality Profiler scales with NEO-PI-R facet scales provided preliminary evidence supporting the convergent and discriminate validity of the Eysenck Personality Profiler scales. However, varimax and targeted validimex factor analyses suggested that some Eysenck Personality Profiler scales were misclassified. For example, the authors suggest that aggressive should move from extraversion to psychoticism which was its location in the original Eysenck and Wilson (1976) scheme, and that practical should be dropped from the instrument altogether. The authors suggest that Eysenck Personality Profiler scales could better be understood in terms of the 5-factor model than the intended 3-factor model. If the 5-factor model is used the authors suggest that in regard to extraversion, ambitious and dogmatic as well as aggressive scales should be dropped from Eysenck Personality Profiler extraversion scale. The remaining traits, active, social, expressive, and assertive being clearly central to the construct of extraversion.

Furnham, Forde and Cotter (1998a) administered the Eysenck Personality Profiler to three groups of subjects totalling 1,006 people in order to assess personality and test taking styles. The results showed that dissimulation correlated with both the neuroticism and psychoticism super factors. Those scoring higher on extraversion and psychoticism take less time to complete the questionnaire compared with introverts and those scoring lower on the psychoticism scale who take more time to complete the questionnaire.

Furnham, Forde and Cotter (1998b) administered the Eysenck Personality Profiler, the Wonderlic Personnel Test (Wonderlic, 1992) and the Baddeley Reasoning Test

(Baddeley, 1968) to 233 subjects to assess the relationship between personality and intelligence. The results showed that the measures of intelligence were associated with stability (rather than neuroticism), introversion (rather than extraversion) and low psychoticism.

Jackson and Corr (1998) administered the Eysenck Personality Profiler to 74 salespeople in a company that sold cosmetic products to retail outlets. The results showed that extraverts achieved higher performance ratings.

Furnham, Forde and Ferrari (1999) administered the Eysenck Personality Profiler and the Work Values Questionnaire (Mantech, 1980) among 92 people (45 males and 50 females) to assess the relationship between personality and work motivation. The results show that extraverts stressed the importance of motivation factors for them, while neurotics rated hygiene factors as more important to them in choosing a particular job. There were no clear correlations with psychoticism.

Jackson, Furnham and Lawty-Jones (1999) administered the Eysenck Personality Profiler to 771 people from different occupational groups to assess the relationship between indecisiveness and neuroticism. The results show that the 'can't decide' score was positively correlated with neuroticism but the size of the correlation varied substantially according to the occupational groups of the test-takers.

## **Summary**

This chapter has set out to investigate the development of the Eysenck Personality Profiler, to describe the component parts of the higher order factors of neuroticism, extraversion and psychoticism, to assess the psychometric properties of the Eysenck Personality Profiler and to give examples of how the Eysenck Personality Profiler has been used for research purposes. Three points emerge from this review. The first point is related to the comprehensive descriptions given by Eysenck and Wilson (1976). In giving such comprehensive descriptions a fuller description of a person's personality is possible and it becomes clearer to the researcher what is being measured. The second point relates to the reliability of the scales. The alpha coefficients of the various scales are adequate and appear to support the internal structure of the scales. There are, however, a few scales which are below the .70 marker given by Kline (1993). The third point relates to the variety of research that has been undertaken by researchers using the Eysenck Personality Profiler. It has been used to assess the personality profile of bikers (Jackson & Wilson, 1993) and physicists (Wilson & Jackson, 1994) and as been used more widely to assess the relationship between the Eysenck Personality Profiler and other measures like, for example, the NEO-PI-R (Costa & McCrae, 1995).

No work has as yet been undertaken to assess the personality profile of clergy using the Eysenck Personality Profiler it is hoped that by using the Eysenck Personality Profiler among clergy a more comprehensive profile can be constructed and that it will become clearer what components of the higher order factors actually relate to the personality of clergy.

Attention will now be given in the second part of this dissertation to the research project and the conclusions that arise from the research.

# **PART TWO**

## **Personality and the Clergy**

- 7. The EPP clergy survey**
- 8. Seven aspects of Extraversion**
- 9. Seven aspect of Neuroticism**
- 10. Seven aspects of Psychoticism**

## **Conclusion and Recommendations**

## **7 The EPP Survey**

### **Overview**

The second part of this dissertation sets out to profile the personality of male and female clergy ordained into the Anglican Church from 1992 until 1996 in England, Ireland, Scotland and Wales. The chapter will be divided into six parts. The first part will look at the design of the questionnaire, the second part will investigate the distribution of the questionnaire, the third part will give a profile of the respondents in terms of age, type of ministry ordained into, marital status and country of ordination, the fourth part will describe the educational background of the clergy, part five will explore the churchmanship of the clergy and part six will describe the first curacy of the clergy.

### ***Questionnaire Design***

The method used to create this profile was a questionnaire survey. The questionnaire consisted of two parts. Part one, contained the 440 items of the Eysenck Personality Profiler and part two of the questionnaire was constructed in order to discover something about the clergy's background, including issues like: age; marital status, level of education, employment status, the name of the diocese into which a person was ordained, and theological college attended are asked alongside questions about priority given to different aspects of ministry.

### ***Distribution***

The Eysenck Personality Profiler Questionnaire was mailed during December, 1992, 1993, 1994, 1995, and 1996 to all clergy ordained during that year into the Anglican Church in England, Ireland Scotland and Wales. The names and addresses of the respondents were obtained from the Church of England Church Commissioners.

Each year achieved a response rate of between 62% and 72%. In 1992, 568 questionnaires were successfully mailed and 353 returned their questionnaires complete, making a response rate of 62.1%. In 1993, 565 questionnaires were successfully mailed and 386 were returned completed, making a response rate of 68.3%. In 1994, 508 questionnaires were successfully mailed and 316 were completed making a response rate of 62.1%. In 1995, 449 questionnaires were successfully mailed and 321 returned making a response rate of 71.5%. In 1996, 484 were successfully mailed and 299 completed, making a response rate of 61.8%. The completed returns for male clergy was 1,148 and the completed returns for female clergy was 523.

### ***Respondents***

It is possible to build up a picture of the respondents by referring to the questions in part two of the questionnaire. The clergy were asked to tick the age band to which they belonged. Of the male respondents 18% were in their twenties, 38% in their thirties, 26% in their forties, 13% in their fifties, and 4% were sixty or over. Of the female respondents

8% were in their twenties, 20% in their thirties, 42% in their forties, 25% in their fifties, and 4% were sixty or over.

The clergy were asked what type of ministry there were ordained into and into which country. Of the male clergy 73% had been ordained to stipendiary ministry and 27% to non-stipendiary ministry; of the women 46% had been ordained to stipendiary ministry and 54% to non-stipendiary ministry. Most of the respondents were ordained in England 86% of the men had been ordained in England, 7% in Wales, 4% in Ireland and 3% in Scotland. Where the women are concerned 90% had been ordained in England, 3% in Wales, 4% in Ireland and 3% in Scotland

The respondents were also asked about their marital status four-fifths, of the male clergy were married (80%), just under a fifth were single (19%) and 1% were widowed and nearly two-thirds of female clergy were married (65%), well over a quarter were single (29%) and 4% were widowed.

When comparing male and female clergy it is interesting to note that the male clergy are younger than the female clergy. There are twice as many male clergy under the age of forty (56%) than female clergy (28%). The data also demonstrate that a higher proportion of the male clergy are in stipendiary ministry (73%) than female clergy (46%).

### ***Education***

The majority of male clergy in the sample have undergone some form of higher

education. Just over three-fifths of them have been to a university (63%), around one in ten have attended a polytechnic (9%) and a quarter have been to a college (25%). Over half of male clergy have a Bachelors degree (55%), over a tenth have a Masters degree (13%) and one in twenty have a doctorate (5%). Just over a quarter of male clergy are non-graduates (26%). Before training for ministry four-fifths of male clergy were in full-time employment (80%), a tenth were full-time students (11%), and under a tenth were unemployed (5%), in part-time employment (3%) or retired (1%).

The majority of female clergy have undergone some form of higher education. Well over a half of them have been to a university (56%), well under a tenth have attended a polytechnic (5%) and a third have been to a college (36%). Over half of female clergy have a Bachelors degree (53%), over a tenth have a Masters degree (12%) and 3% of female clergy have a doctorate. A third of female clergy are non-graduates (33%). Before training for ministry over two-fifths of female clergy were in full-time employment (44%), a quarter were in part-time employment (25%) and just over a fifth were housewives (22%). Under a tenth were full-time students (6%) or unemployed (3%).

Educationally there is very little difference between male and female clergy: similar proportions of both have attended some form of higher educational institutions. There is a difference, however, in employment patterns. Before entering ministry there was a higher proportion of male clergy in full-time employment (80%) than female clergy (44%).

### ***Churchmanship***

When asked about their churchmanship just over two-fifths of male clergy (41%) claimed to be catholic, nearly a half claimed to be evangelical (45%) and a tenth claimed to be neutral (13%). Where liberal and conservative tendencies are concerned, two-fifths of male clergy claim to be liberal (40%), just under a half claim to be conservative (46%) and well over a tenth claim to be neutral (14%).

When asked about their churchmanship nearly a half of female clergy claimed to be catholic (47%), nearly a third claimed to be evangelical (31%) and a fifth claimed to be neutral (22%). Where liberal and conservative tendencies are concerned, three-fifths of female clergy claim to be liberal (60%), a fifth claim to be conservative (22%) and well over a tenth claim to be neutral (17%).

In terms of churchmanship there is very little difference between the proportion of male and female clergy who claim to be catholic or evangelical. There is, however, a difference between the proportion of male and female clergy who claim to be liberal and conservative. From the data it appears that a higher proportion of the female clergy claim to be liberal (60%) than the male clergy (40%).

### ***First Curacy***

The male clergy in the sample have been appointed to a variety of different environments for their first curacy: 12 % are ministering in the inner city, 29% in the suburbs 17% in large towns, 16% in small towns, 10% in market towns and 16% in villages and scattered

rural benefices. Three quarters of these areas are not significantly deprived (75%), while a quarter are significantly deprived (25%).

The female clergy in the sample have been appointed to a variety of different environments for their first curacy: 13% of female clergy are ministering in the inner city, 27% in the suburban areas, 12% in large towns, 15% in small towns, 13% in market towns, 22% in villages and scattered rural benefices. Three quarters of these areas are not significantly deprived (75%), while, a quarter are significantly deprived (25%).

### ***Summary***

This chapter has described the people who responded to the questionnaire. It has profiled the general background to the lives of the clergy in terms of age, marital status, education and has described the type of curacy the respondents were engaged in.

The following three chapters will now explore the personality profile of these clerics in terms of the three higher order dimensions of neuroticism, extraversion and psychoticism. A comparison of the findings will be made between male and female clergy and between male and female clergy and men and women in the normal population. Normative data for the 21 scales of the Eysenck Personality Profiler have been calculated by Eysenck, Wilson, and Jackson (1999) on the basis of the responses of 697 men and 697 women.

## 8. Seven aspects of Neuroticism

### Overview

This chapter will investigate the higher order dimension of neuroticism and its seven component parts. The seven component parts that make up the higher order dimension of neuroticism are:

- Low self-esteem (inferiority/self-esteem)
- Unhappiness (unhappy/happy)
- Anxiety (anxious/calm)
- Dependency (dependence/autonomy)
- Hypochondriasis (hypochondria/sense of health)
- Guilt (guilt/guiltfreedom)
- Obsessiveness (obsessive/casual)

The chapter will be subdivided into the seven component parts that make up the higher order factor of neuroticism. Each of the component parts will be explored under eight sections. The first section gives the description of the component part as defined by Eysenck and Wilson (1976). The second section investigates the relationship between scripture and the component part. The third section explores the psychological theory of the component part. Section four gives examples of empirical research already undertaken in relation to the component part and the psychology of religion. The fifth

section uses the findings of the previous sections to make a hypothesis on which to test the present data. Section six, investigates the scale properties of the component part. Section seven gives an interpretation of the findings. Finally, section eight sets about making a conclusion.

The quantity of empirical research available for each component part varies greatly between one component part and another component part. This is due largely to the fact that some of the component parts have been researched more fully than others in the psychology of religion. The intention of including previous empirical research is to get a feel for what has already been done in that area of the psychology of religion and not to give a comprehensive review.

In section seven, interpreting the findings, comparisons will be made between male clergy and female clergy, between male clergy and the population norms for men in general and between female clergy and the population norms for women in general. Normative data for the 21 scales of the Eysenck Personality Profiler have been calculated by Eysenck, Wilson and Jackson (1999) on the basis of the responses of 697 men and 697 women.

## **Low self-esteem (inferiority / self-esteem)**

### ***Definition***

The first construct proposed by the Eysenck Personality Profiler within the higher order dimension of neuroticism is anchored by the opposite poles 'inferiority' and 'self-

esteem'. In their original formulation Eysenck and Wilson (1976) describe this construct as self-esteem and offer the following definition:

people who score high on self-esteem tend to have plenty of confidence in themselves and their abilities. They think of themselves as worthy, useful human beings, and believe that they are well liked by other people. Without necessarily implying cockiness or conceit it could be said that they like themselves a lot. Low scorers have a low opinion of themselves, believing that they are unattractive failures. An extreme low score may be thought of as approximating to the celebrated 'inferiority complex.

The construct of the self has been of interest to psychologists for a number of years and has been operationalised in a number of ways (Baumeister, 1997). Psychologists see the main construct of the self as self-concept which they have divided into two major dimensions: a descriptive component, known as the self-image and an evaluative component known as self-esteem. When reviewing the literature on self-concept, however, the vast majority of research has focused on self-esteem (Baumeister, 1997). The study of individual differences in self-esteem typically features its measurement through self-report questionnaires. For example, the self-esteem scale (Rosenberg, 1965), the Tennessee Self concept scale (TSCS, Roid & Fitts, 1988), the Coopersmith Self-Esteem Inventory (SEI, Coopersmith, 1967), the Adjective Check List (Gough, 1952), the Q sort (Stephenson, 1953), and the Lipsett Self-Concept Scale (Lipsitt, 1958).

### ***Scripture and low self-esteem***

In the Christian tradition there are two different ways of understanding the relationship between self-esteem and Scripture. The first understanding is one which suggests the unworthiness of self:

But the tax collector, standing far off, would not even look up to heaven, but

was beating his breast and saying, 'God, be merciful to me, a sinner!' (Luke 18: 13).

And as he sat at dinner in Levi's house, many tax collectors and sinners were also sitting with Jesus and his disciples – for there were many who followed him. When the scribes of the Pharisees saw that he was eating with sinners and tax collectors, they said to his disciples, 'Why does he eat with tax collectors and sinners?' When Jesus heard this, he said to them, 'Those who are well have no need of a physician, but those who are sick: I have come not to call the righteous, but sinners' (Mark 2: 15-17).

The second understanding suggests that religious people who put their faith in God should love themselves, as well as love God and love their neighbour.

'Which commandment is the first of all?' Jesus answered, 'the first is, Hear O Israel: the Lord our God, the Lord is one; you shall love the Lord your God with all your heart, and with all your soul, and with all your mind, and with all your strength.' The second is this, 'You shall love your neighbour as yourself' there is no other commandment greater than these' (Mark 12: 28-31).

There is also the parable of the prodigal son who returns to his father and says:

Father I have sinned against heaven and before you; I am no longer to be called your son; But the Father said to his slaves, 'Quickly bring out a robe – the best one – and put it on him; put a ring on his finger and sandals on his feet' (Luke 15: 21-23).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and self-concept

### ***Psychological theory***

Theologically, the link between religion and self-concept is ambivalent, at least within the Christian tradition. One strand within the Christian tradition clearly emphasises a

love of self, as well as love of God and love of neighbour. From this starting point Bahr and Martin (1983) argue that:

People who consider themselves Christians should manifest the fruit of such love. The more religious the person, presumably, the more evident the love of self and others.

More specifically, psychological theory concerned with self-concept suggests that individual self-evaluation is, at least partly, derived from the individual's view of how he or she is evaluated by others. If the primary emphasis in religion is thought to be a God who views individuals as unworthy and miserable sinners, it is reasonable to hypothesise a negative correlation between religion and a positive self-concept. On the other hand, if the primary emphasis in religion is thought to be a God who views individuals as unconditionally acceptable and accepted, it is reasonable to hypothesise a positive correlation between religion and a positive self-concept (Jones & Francis, 1996).

Integration of the findings from previous empirical studies concerned with the relationship between religion and self-concept is confused by three factors. These studies have used a variety of measures of self-concept. They have employed a range of indicators of religiosity. They have been conducted on diverse samples. No series of replication studies has been developed to explore the significance of these factors on shaping the reported relationship between religion and self-concept. Working within the constraints imposed by these difficulties, seven rather different pictures emerge from previous empirical studies concerned with the relationship between religion and self-concept.

### *Empirical Evidence*

The first set of studies suggests that there is no relationship between religiosity and self-esteem. For example, Strunk (1958a) administered a modified form of the Brownfain (1952) negative self-concept measure to 120 unspecified subjects together with the Allport, Vernon and Lindzey (1960) study of values. No significant difference was found on the religious value measure between high and low scorers on the negative self-concept measure.

Hanawalt (1963) administered the Social Personality Inventory for College Women developed by Maslow (1942) as a measure of self-esteem to 111 college women, equally divided between Catholics, Jews and Protestants. No differences in levels of self-esteem were found between the three groups.

Heintzelman and Fehr (1976) administered a modified form of the Coopersmith (1967) self-esteem inventory, alongside Browns' (1962) modified form of the Thouless test of religious orthodoxy to 41 male and 41 female students. They found no correlation between the two measures.

Fehr and Heintzelman (1977) administered a modified form of the Coopersmith (1967) self-esteem inventory, Browns' (1962) modified form of the Thouless test of religious orthodoxy and the Allport, Vernon, Lindzey (1960) study of values test to 60 male and 60 female students. They found no correlation between self-esteem and either religious measure.

Bahr and Martin (1983) administered a four item measure of self-esteem derived from the Rosenberg Self-Esteem Scale (Rosenberg, 1965) to a sample high school pupils of undisclosed age. No significant correlation was found between self-esteem and church attendance or between self-esteem and evangelical outlook as measured by the item 'Christianity is the one true religion'.

Aycock and Noaker (1985) employed the 37 item self-esteem scale of the Coping Resources Inventory for Stress attributed to Matheny, Curlette, Aycock, Pugh and Taylor (1981). They found no significant difference between the mean scores of two opportunity samples: 351 evangelical Christians from college and church settings and 1,115 general volunteers comprised of students, administrators, and government employees.

Gill and Thornton (1989) administered the 25 item form of the Coopersmith (1967) self-esteem inventory together with their own 13 item scale of belief to 179 high school pupils between the ages of 16 and 17 years. They found no significant relationship between these two variables.

Finally, Frankel and Hewitt (1994) employed the self-esteem measure developed by Pearlin and Schooler (1978) to compare the responses of 172 students affiliated to a number of Christian clubs or faith groups and 127 students recruited through first and second year psychology courses and who were not affiliated to any campus Christian club at the time of the research. No significant differences were found between the self-esteem scores of the two groups.

The second set of studies suggests that there is a positive relationship between religiosity and self-esteem. For example, Strunk (1958b) administered a modified form of the Brownfain (1952) Self-Rating Inventory to a sample of 136 high school students, with a mean age of 16.4 years, together with a seven item religiosity index, combining questions concerned with church attendance, regular contributions of money and time to the church, the reading of some type of religious literature, regular prayer activity, a belief that the persons own religious beliefs and needs were stronger than average when compared with those of peers, and the admittance of a feeling that some sort of religious belief is necessary for a mature outlook on life. A positive correlation was found between religiosity and self-concept.

Krause and van Tran (1989) employed data from a national sample of 511 Black Americans aged over 54 to examine the relationship between a three item measure of self-esteem and two, three-item measures of non-organisational and organisational religiosity. They found that both indices of religiosity were positively related to self-esteem.

Finally, Forst and Healy (1990) administered the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) together with Bahr and Martins' (1983) Scale of Religious Faith to 204 students. They found that the religious faith items correlated positively with aspects of self-esteem.

The third set of studies suggests that there is a negative relationship between religiosity and self-esteem. For example, Beit-Hallahmi and Nevo (1987) employed the self-concept questionnaire developed by Hofman, Beit-Hallahmi and Lazarowitz (1982) to compare the mean scores of 40 Israeli men who had switched to Orthodox Judaism with a matched control group of 40 Israeli men who remained secular. They found that the religious group recorded significantly lower self-esteem scores.

In a study employing the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) alongside the Allport and Ross (1967) scale of extrinsic religiosity among 194 students, Watson, Hood, Morris and Hall (1985) found a negative correlation between extrinsic religiosity and self-esteem.

The fourth set of studies suggests that different indices of religiosity may lead to different relationships with the same measure of self-esteem among the same sample. For example, Cowen (1954) administered the Brownfain (1952) negative self-concept measure to 81 college undergraduates, together with a 13 item theism scale intended to measure strength of belief in God and an 11 item ethics scale intended to measure strength of reliance on the church for ones ethical code. The comparison was made between the 26 subjects who scored high on negative self-concept and the 21 subjects who scored low on negative self-concept. While self-concept was unrelated to the theism scale, negative self-concept was significantly related to less reliance on the church for an ethical code.

Wickstrom and Fleck (1983) administered the short form of the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) to 77 female and 53 male college students, all of whom had at some time lived overseas as children of missionaries, together with an unidentified measure of consensual and committed religiosity. They found that self-esteem was negatively correlated with consensual religiosity, but uncorrelated with committed religiosity.

Finally, Nelson (1990) administered the Rosenberg (1965) Self-Esteem Scale (Rosenberg, 1965) to 68 elderly persons, together with a question about church attendance and the Age Universal Religious Orientation Scale (Gorsuch and Venable, 1983). He found that self-esteem was uncorrelated with church attendance, uncorrelated with extrinsic religiosity, but significantly positively correlated with intrinsic religiosity.

The fifth set of studies suggests that different indices of self-esteem may lead to different relationships with the same measures of religiosity among the same sample. For example, Watson, Hood, Morris and Hall (1985) administered both the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) to 98 male and 96 female students, together with the Allport and Ross (1967) measures of intrinsic and extrinsic religiosity. They found that the Coopersmith index correlated negatively with extrinsic religiosity and was unrelated to intrinsic religiosity, while the Rosenberg index was unrelated to both measures of religiosity.

In a second sample of 97 male and 130 female students, Watson, Hood, Morris and Hall (1985) administered the same two indices of self-esteem, together with the Batson and Ventis (1982) measures of internal, external and interactional religiosity. They found that the Rosenberg index was negatively correlated with external and interactional religiosity and unrelated to internal religiosity, while the Coopersmith index was unrelated to all three measures of religiosity.

Watson, Morris and Hood (1987) administered both the Rosenberg Self-Esteem Scale (Rosenberg, 1965) and the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) to 75 male and 87 female students, together with the Allport and Ross (1967) measures of intrinsic and extrinsic religiosity and the Batson and Ventis (1982) measures of internal, external and interactional religiosity and doctrinal orthodoxy. They found that none of the six religious measures correlated with the Rosenberg index. The Coopersmith index was positively correlated with external religiosity, but unrelated to the other measures of religiosity.

A sixth set of studies suggest that different relationships may emerge between the same indices of self-esteem and religiosity among different groups of people. For example, Spilka and Mullin (1977) administered an abbreviated form of the Coopersmith Self-Esteem Inventory (Coopersmith, 1967) together with the Allen and Spilka (1967) measures of committed and consensual religiosity to three distinct samples: 170 students attending a Catholic college; 152 pupils attending a Catholic high school; and 99 pupils attending a Lutheran high school. Regarding committed religiosity, they found a

significant positive correlation with self-esteem in one sample, but no relationship in the other two. Regarding consensual religiosity, they found a significant positive correlation with self-esteem in one sample, a significant negative correlation with self-esteem in the second sample, and no relationship with self-esteem in the third sample.

Moore and Stoner (1977) administered the Brownfain (1952) negative self-concept measure, together with Strunks' (1958b) seven item religiosity index to 46 male and 66 female high school juniors. A positive correlation was found between self-concept and religiosity for males, but not for females.

Smith, Weigert and Thomas (1979) administered a semantic differential index of self-esteem, together with a modification of the Glock and Stark (1965) measures of four dimensions of religion (practice, belief, experience and knowledge) to 1,995 adolescents from middle class Catholic high schools in six cities, representing five cultural contexts (United States of America, Puerto Rico, Yucatan, Spain and Germany). The data were analysed for males and females separately in each of the six cities. Nine of the twelve analyses demonstrated a significant positive correlation between total religiosity and self-esteem, while three of the analyses found no relationship between total religiosity and self-esteem.

Meisenhelder (1986) administered the Rosenberg Self-Esteem Scale (Rosenberg, 1965), together with an unspecified measure of the importance of religious beliefs, to 163 married women living with their husbands and children. A significant positive

correlation was found between self-esteem and importance of religious beliefs among home makers. No significant relationship was found between self-esteem and importance of religious beliefs among women in employment.

Finally, Wade, Thompson, Tashakkori and Valente (1989) administered a four item index of self-esteem to students from grades seven, eight and nine in 1980. The students were also asked to assess the importance of religion to their daily life on a six point scale. The exercise was repeated in 1982. A total of 1,153 students were tested at both points in time. Eight separate analyses are reported for male and female, black and white students, in 1980 and 1982. A positive correlation was reported between religiosity and self-esteem for female white students in 1982, while the other seven analyses found no significant relationship between the two variables.

When reviewing the above research it became apparent that very little research had been undertaken between self-esteem and those in ministry. What research there is has concentrated on Cattells 16PF (Cattell, Eber & Tatsuoka, 1970) personality questionnaire Factor O.

Nauss (1972b) administered the 16PF to 64 graduating seminarians from Springfield, Illinois. The results showed that these seminarians scored lower on the scale of self-worth and self-esteem indicating that they are more self-assured and self-confident.

Nauss (1972b) administered the 16PF to 242 graduating seminarians from Springfield,

Illinois. The results showed that these seminarians scored lower on the scale of self-worth and self-esteem indicating that they are more self-assured and self-confident.

Musson (1998) administered the 16PF to 441 male Anglican clergy who attended residential ministry workshops. The data show that male clergy scored significantly higher on Factor O which measures feelings of self-worth and self-esteem than previous research in America ( $p < .01$ ) This reveals that Anglican clergy in England are apprehensive and insecure.

Wilson (1974) administered the 16PF to 100 Roman Catholic priests in the USA. The results showed that these Roman Catholic priests scored lower on the scale of self-worth and self-esteem indicating that they are more self-assured and self-confident.

Pallone and Banks (1968) administered the 16PF to 21 Seventh-day Adventists from a seminary in North America. The results showed that these Seventh-day Adventists scored lower on the scale of self-worth and self-esteem indicating that they are more self-assured and self-confident.

The only research found using an alternative measure of self-concept was that by McAllister (1982). He administered the Tennessee Self-Concept Scale (Fritts, 1976) to 40 evangelical or fundamentalist ministers. He found that these ministers recorded a higher self-concept score than the population norms.

## ***Hypothesis***

The link between religion and self-esteem at least within the Christian tradition is ambivalent. The Christian scriptures suggest the unworthiness of self as well as love of self and others. Psychological theory and empirical research suggest that there is no relationship between religiosity and self-esteem (Bahr & Martin, 1983); that there is a positive relationship between religiosity and self-esteem (Strunk, 1958b) and that there is a negative relationship between religiosity and self-esteem (Beit-Hallahmi & Nevo, 1987). Similarly, empirical research amongst ministers of religion suggests that those in ministry have low self-esteem (Nauss, 1972b) and high self-esteem (Wilson, 1974).

It can be said, from the perspective of Christian scripture, from psychological theory and empirical evidence that the relationship between self-esteem and religion is mixed. From this information it is hypothesised that those in ministry would have neither higher nor lower self-esteem than those in the normal population.

## ***Scale Properties***

Table 8.1 reports on the reliability of the 20 item index of self-esteem and gives the item rest of scale correlations. The self-esteem scale achieved an alpha coefficient of .85 for the male clergy and .86 for the female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

Table 8.1 Low self-esteem (inferior/self-esteem) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you often wish that you were someone else?	0.3844	0.3400
Do you sometimes feel that you can never do anything right?	0.3870	0.3901
Do you often have doubts about your abilities?	0.5093	0.4536
Do you feel that you have little to be proud of?	0.4272	0.4177
Do you think your personality is appealing to other people?	0.2695	0.3123
Do you often feel ashamed of things that you have done?	0.3768	0.3274
Do you sometimes withhold your opinions for fear that people will laugh and criticize you?	0.3726	0.3951
Are you shy and self-conscious in social situations?	0.4383	0.4636
In general are you pretty sure of yourself?	0.5003	0.4741
Would you be troubled by feelings of inadequacy if you had to make a speech?	0.3168	0.4364
Are you often inclined to question your worth as a person?	0.5786	0.6054
Do you have a tendency to feel socially inferior to the people you meet even though, objectively speaking, you are not outranked?	0.5560	0.4996
Are there a lot of things about yourself that you would change if you could?	0.4606	0.4514
Do you suffer from inferiority feelings?	0.6317	0.5987
Do you find it difficult to do things in a way that wins the attention and approval of others?	0.3204	0.3432
Do you feel embarrassed when looking at photographs of yourself and complain that they seldom do you justice?	0.2623	0.2805
Are you often reticent with other people because you think they will not like you?	0.5486	0.5666
Are you satisfied with your appearance?	0.3593	0.3979
Do you often think of yourself as a failure?	0.5711	0.5819
When people say nice things about you do you find it difficult to believe they are really sincere?	0.4241	0.5304
Alpha	0.8512	0.8551

### *Interpreting the findings*

Table 8.2 presents the mean scale scores on the index of self-esteem for male and female clergy separately and compares the scores with the test manual. These data demonstrate that male clergy record significantly higher scores on the index of low self-esteem in comparison with the scores recorded by men in general; that female clergy record

significantly higher on the index of low self-esteem than women in general. That female clergy record significantly higher scores than male clergy on the sub-scale of low self-esteem and females in the normal population score significantly higher than men in the normal population on the index of low self-esteem.

In summary, the data demonstrate that male and female clergy have lower self-esteem than males and females in the normal population and that female clergy record higher scores on the scale of low self-esteem than their male colleagues.

Table 8.2 Mean scale scores (for men and women compared with population norms)

Sex	clergy		norms	
	mean	sd	mean	sd
Male	12.00	8.18	8.76	7.69
Female	14.37	8.54	12.06	9.11

Male clergy/female clergy,	t = 5.416	p < .001
Male clergy/male norms,	t = 8.436	p < .001
Female clergy/female norms,	t = 4.502	p < .001
Male norms/female norms	t = 7.308	p < .001

Table 8.3 penetrates behind the overall mean scores recorded on the index of self-esteem to examine the male and female clergy who endorse the individual items. These data demonstrate that well over a half of male clergy often have doubts their ability (57%). That two-fifths or more male clergy sometimes feel that they can never do anything right (44%), feel ashamed of things they have done (41%) and withhold their opinions for fear that people will laugh and criticize them (48%). Between a fifth and a third are shy and

self-conscious in social situations (20%), are inclined to question their worth as a person (24%), have a tendency to feel socially inferior to the people they meet (23%) suffer from inferiority feelings (31%) and are reticent with other people because they think they will not be liked (22%).

Table 8.3 Percentage endorsement of the twenty items of the index of low self-esteem (inferior/self-esteem) for male and female clergy

	Male %	Female %
Do you often wish that you were someone else?	6	5
Do you sometimes feel that you can never do anything right?	44	55
Do you often have doubts about your abilities?	57	65
Do you feel that you have little to be proud of?	11	8
Do you think your personality is appealing to other people?	63	62
Do you often feel ashamed of things that you have done?	41	37
Do you sometimes withhold your opinions for fear that people will laugh and criticize you?	48	55
Are you shy and self-conscious in social situations?	20	21
In general are you pretty sure of yourself?	76	65
Would you be troubled by feelings of inadequacy if you had to make a speech?	18	32
Are you often inclined to question your worth as a person?	24	29
Do you have a tendency to feel socially inferior to the people you meet even though, objectively speaking, you are not outranked?	23	27
Are there a lot of things about yourself that you would change if you could?	26	24
Do you suffer from inferiority feelings?	31	42
Do you find it difficult to do things in a way that wins the attention and approval of others?	9	11
Do you feel embarrassed when looking at photographs of yourself and complain that they seldom do you justice?	19	36
Are you often reticent with other people because you think they will not like you?	22	24
Are you satisfied with your appearance?	66	46
Do you often think of yourself as a failure?	10	15
When people say nice things about you do you find it difficult to believe they are really sincere?	26	36

On the other hand, over three-quarters of male clergy are pretty sure of themselves (76%). Over two-thirds of male clergy think their personality is appealing to other people (63%) and are satisfied with their appearance (66%).

These data also demonstrate that two-thirds of female clergy often have doubts their ability (65%), and well over a half of female clergy sometimes feel that they can never do anything right (55%), withhold their opinions for fear that people will laugh and criticize them (55%). Two-fifths of female clergy suffer from inferiority feelings (42%). Between a fifth and a third are shy and self-conscious in social situations (21%), are inclined to question their worth as a person (29%), have a tendency to feel socially inferior to the people they meet (27%) and are reticent with other people because they think they will not be liked (24%).

On the other hand, over two-thirds of female clergy are pretty sure of themselves (65%) and think their personality is appealing to other people (62%). Under a half of female clergy are satisfied with their appearance (46%).

### ***Conclusion***

These data demonstrate that male and female clergy score significantly higher on the index of low self-esteem as proposed by the Eysenck Personality Profiler in comparison with men and women in the general population. These findings are not consistent with previous research using Cattells' 16PF among American clergy (Nauss, 1972b; Wilson,

1974 and Pallone & Banks, 1968), but are consistent with Musson's (1998) research among British Anglican clergy.

## **Unhappiness (unhappy/happy)**

### ***Definition***

The second construct proposed by the Eysenck Personality Profiler within the higher order dimension of neuroticism is anchored by the opposite poles 'unhappy' and 'happy'. In their original formulation Eysenck and Wilson (1976) describe this construct as happiness and offer the following definition:

high scorers on the happiness sub-factor are generally cheerful, optimistic and well. They are satisfied with their existence, find life rewarding, and are at peace with the world. Low scorers are characteristically pessimistic, gloomy and depressed, disappointed with their existence and at odds with the world.

Psychologists claim that, supportive close relationships, feeling liked, affirmed and encouraged by intimate friends and family are linked with both health and happiness (Myers, 1996). There has, however, been little research undertaken by psychologists to assess people's happiness. Most of the research has focused on well being as a psychological construct rather than happiness. One instrument that has developed over the past few years is the Oxford Happiness Inventory (Argyle, Martin and Lu, 1995).

Argyle and Crossland (1987) suggest that happiness comprises three components: the frequency and degree of positive affect or joy; the average level of satisfaction over a period; and the absence of negative feelings, such as depression and anxiety. Working from this definition, they developed the Oxford Happiness Inventory by reversing the 21

items of the Beck Depression Inventory, and adding eleven further items to cover aspects of subjective wellbeing. Three items were subsequently dropped, leading to a 29 item scale. The test constructors report an internal reliable .90 and a seven week test-retest reliability of .78. Validity was established against happiness ratings by friends and by correlations with measures of positive affect, negative affect and life satisfaction.

A series of studies employing the Oxford Happiness Inventory in a range of different ways has confirmed the basic reliability and validity of the instrument and begun to map the correlates of an operational definition of happiness (Argyle, Martin and Lu, 1995). For example, Argyle and Lu (1990b) found that social competence was a significant predictor of happiness in a study among 63 adults. Lu and Argyle (1991) found that social skills and cooperativeness were significant predictors of happiness in a study among 114 adults. Lu and Argyle (1992) found that happiness was predicted by satisfaction with relationships with people from whom support had been received in a study among 65 adults. Lu and Argyle (1993) found an inverse relationship between happiness and the total time spent watching television, while Lu and Argyle (1994) and Hill and Argyle (1998) found that happiness was positively correlated with engagement in a serious leisure activity. Other studies have reported significant relationships between happiness and self-esteem (Lu and Argyle, 1991), coping styles (Rim, 1993) and locus of control (Noor, 1993).

Also a set of four studies using the Oxford Happiness Inventory has begun to chart the relationship between happiness and Eysenck's model of personality which maintains that

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Empirical evidence regarding the relationship between religion and happiness is scarce, due largely to the absence, until recently, of adequate instrumentation to assess happiness properly grounded in psychological theory. The recent development of the Oxford Happiness Inventory by Argyle, Martin and Crossland (1989) now provides a much more adequate theoretical discussion of the nature of happiness and an appropriate measure of the construct.

### *Empirical evidence*

In 1996, Robbins and Francis explored the relationship between happiness, religion and personality among a sample of 360 undergraduates in Wales. They used the short form of the Revised Eysenck Personality Questionnaire (Eysenck, Eysenck & Barrett, 1985), the Oxford Happiness Inventory (Argyle, Martin & Crossland, 1989) and the Francis Scale of Attitude toward Christianity (Francis & Stubbs, 1987). First, they found that happiness is correlated positively with extraversion, correlated negatively with neuroticism and uncorrelated with psychoticism. Second, attitude toward Christianity is uncorrelated with extraversion, uncorrelated with neuroticism and negatively correlated with psychoticism. Third, there is a significant positive correlation between attitude toward Christianity and happiness.

Their finding is consistent with the results from a number of other studies using less adequate measures of happiness. For example, in an early study, conducted among 108 men and 102 women over the age of sixty-five in the United States of America, O'Reilly

(1957) assessed happiness on a three point continuum (very happy, moderately happy and less happy) alongside reported church attendance. He found that 55% of the very happy respondents were active in the practice of their religion, compared with 47% of the moderately happy and 44% of the less happy. Wilson (1965) assessed happiness on a ten point scale, from 1 (completely and utterly unhappy; terrible depression and gloom all of the time) to 10 (completely and supremely happy; tremendous joy and elation all of the time), alongside a five point index of religious commitment. He found a positive correlation of 0.33 between the two indices. In a study conducted among 225 elderly people in the United States of America, reported by Zuckerman, Kasl and Ostfeld (1984), the interviewers assess the respondents on a five point scale, which was subsequently collapsed into two categories (happy and not happy). This study reported a positive correlation between happiness and religiosity, assessed by summing three questions concerned with frequency of church attendance, self-assessed degree of religiousness and degree of comfort derived from religion.

Reanalysing data from the 1984 National Opinion Research Centre Survey, Reed (1991) explored the relationship between happiness and strength of religious affiliation among 1,473 respondents. Religious affiliation was divided into two categories (strong-weak), while happiness was assessed in three categories (very happy, pretty happy and not too happy). The data demonstrate a significant positive relationship between self-reported strength of religious affiliation and happiness. Reanalysing data from the General Social Survey in the United States of America, Ellison (1991) assessed happiness on a three point continuum (not too happy, pretty happy and very happy) alongside a range of

religious variables. He reported a significant positive relationship between firm religious beliefs and happiness.

Other studies reporting a positive relationship between religiosity and a variety of measures of happiness include Graney (1975), Cutler (1976), Balswick and Balkwell (1978) and Frankel and Hewitt (1994).

Less clear cut results, however, are reported in another set of studies, including Blazer and Palmore (1970), McNamara and St George (1978), Shaver, Lenauer and Sadd (1980), Yates, Chalmer, St James, Follansbee and McKegney (1981), Tellis-Nayak (1982), Heisel and Faulkner (1982) and Poloma and Pendleton (1989, 1990, 1991). These studies suggest that the relationship between religiosity and happiness may vary according to the measures of religiosity employed and the samples studied.

### ***Hypothesis***

The link between religion and happiness at least within the Christian tradition is one that suggests that religious people are happier. The Christian scriptures alongside the empirical research report that religious people are happier (Ellison, 1991). Consequently ministers of religion who guide people in the way of faith should be happier. It is hypothesised that clergy in the present sample would be happier than those in the general population.

### ***Scale Properties***

Table 8.4 reports on the reliability of the 20 item index of unhappiness and gives the item rest of scale correlations. The unhappiness scale achieved an alpha coefficient of .86 for men and .86 for women. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

Table 8.4 Unhappiness (unhappy/happy) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you often feel lonely even when you are with other people?	0.4747	0.5231
Do you feel that you often get a raw deal out of life?	0.4440	0.4892
Do you sometimes feel that you don't care what happens to you?	0.3027	0.4111
Do you feel cheated when you look back on what has happened to you?	0.3940	0.4332
Do you often suffer from loneliness?	0.4557	0.5256
Do you feel a sense of inner calm and contentment most of the time?	0.4348	0.4640
Are you often overcome by sadness?	0.5235	0.5184
Do you ever feel 'just miserable' for no good reason?	0.4201	0.3166
Do you often get the feeling that you are just not a part of things?	0.5182	0.4529
Does it seem to you that other people always get the good luck and opportunities?	0.4137	0.3779
Are you about as happy as the next person?	0.4295	0.3274
Have you ever wished that you were dead?	0.4020	0.3643
Do you often feel depressed when you wake up in the mornings?	0.5806	0.5475
In general would you say that you are satisfied with your life?	0.5173	0.4807
Do you seem to have more than your share of bad luck?	0.3940	0.4215
Is it a long time since you last felt really happy and ready for anything?	0.5418	0.5384
Generally speaking have you been successful in achieving your aims and goals in life?	0.3145	0.2709
Do things often seem hopeless to you?	0.5725	0.5162
Do you often feel down in the dumps?	0.6923	0.6595
Have you often felt listless and tired for no good reason?	0.4694	0.4514
Alpha	0.8632	0.8559

Table 8.5 presents the mean scale scores on the index of unhappiness for males and females separately and compares these scores with the norms provided in the test manual.

The data demonstrate that there is no significant difference between male clergy on the scale of unhappiness and men in the normal population. Females in the normal population record significantly higher scores on the scale of unhappiness than female clergy. There is no significant difference between male clergy and female clergy on the scale of unhappiness. Females in the normal population record significantly higher scores on the scale of unhappiness than men in the normal population.

These data demonstrate that male clergy are neither more or less unhappy than the general population and that female clergy are happier than the normal population. There is no significant difference between male and female clergy on the scale of unhappiness.

Table 8.5 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	7.95	7.49	7.51	7.81
Female	8.15	7.31	9.31	8.92

Male clergy/female clergy,	t = 0.510	p < NS
Male clergy/male norms,	t = 1.204	p < NS
Female clergy/female norms,	t = 2.425	p < .01
Male norms/female norms	t = 4.008	p < .001

### ***Interpreting the Findings***

Table 8.6 penetrates behind the overall mean scores recorded on the index of unhappiness to examine the male and female clergy who endorse the individual items. These data demonstrate that a third or more of male clergy feel 'just miserable' for no good reason (38%) and often feel listless and tired for no good reason (32%). Between a fifth and a

third of male clergy feel lonely even when they are with other people (20%), sometimes feel that they don't care what happens to themselves (24%), they often get the feeling that they are just not part of things (20%) and have at some point wished they were dead (27%).

On the other hand, nine in ten of male clergy do not feel that they often get a raw deal out of life (93%), do not feel that other people get the good luck and opportunities (92%), do not feel that things seem hopeless (92%), and do not feel cheated when they look back on what has happened to them (91%).

Table 8.6 Percentage endorsement of the twenty items of the index of unhappiness (unhappy/happy) for male and female clergy

	Male %	Female %
Do you often feel lonely even when you are with other people?	20	25
Do you feel that you often get a raw deal out of life?	7	8
Do you sometimes feel that you don't care what happens to you?	24	18
Do you feel cheated when you look back on what has happened to you?	9	9
Do you often suffer from loneliness?	15	17
Do you feel a sense of inner calm and contentment most of the time?	63	67
Are you often overcome by sadness?	19	26
Do you ever feel 'just miserable' for no good reason?	38	47
Do you often get the feeling that you are just not a part of things?	20	20
Does it seem to you that other people always get the good luck and opportunities?	8	5
Are you about as happy as the next person?	79	84
Have you ever wished that you were dead?	27	37
Do you often feel depressed when you wake up in the mornings?	10	11
In general would you say that you are satisfied with your life?	86	90
Do you seem to have more than your share of bad luck?	3	5
Is it a long time since you last felt really happy and ready for anything?	10	10
Generally speaking have you been successful in achieving your aims and goals in life?	80	83

Do things often seem hopeless to you?	8	6
Do you often feel down in the dumps?	14	14
Have you often felt listless and tired for no good reason?	32	33

These data also demonstrate that a third or more of female clergy feel 'just miserable' for no good reason (47%), have at some point wished they were dead (37%) and often feel listless and tired for no good reason (33%). Between a fifth and a third of female clergy feel lonely even when they are with other people (25%), are often overcome by sadness (26%) and they often get the feeling that they are just not part of things (20%)

On the other hand, nine in ten of female clergy do not feel that other people get the good luck and opportunities (95%), do not feel that things seem hopeless (94%), do not feel that they often get a raw deal out of life (92%), and do not feel cheated when they look back on what has happened to them (91%).

### ***Conclusion***

These data demonstrate that male clergy are neither more nor less unhappy than men in the normal population. This finding is not consistent with previous research which suggests that religious people are happier (Graney, 1975; Cutler, 1976). Female clergy are, however, happier than females in the normal population and this is consistent with previous research which demonstrates that religious people are happier (Balswick & Balkwell, 1978; Frankel & Hewitt, 1994; Robbins & Francis, 1996).

## **Anxiety (anxious/calm)**

### ***Definition***

The third construct proposed by the Eysenck Personality Profiler within the higher order dimension of neuroticism is anchored by the opposite poles 'anxious' and 'calm'. In their original formulation Eysenck and Wilson (1976) described this construct as 'anxiety' and offer the following definition:

high scorers on the anxiety sub-factor are people who are easily upset by things that go wrong and are inclined to worry unnecessarily about things that may or may not happen. Such people account for a high proportion of the consumption of minor tranquillisers like Librium and Valium. Low scorers are placid, serene and resistant to irrational fears and anxieties.

The construct 'anxiety' has long been of interest to psychologists. In psychology the personality construct of anxiety is traditionally found at the centre of many different systems and theories of personality (McAdams, 1997). In recent years anxiety has been the second most frequently measured symptom complex (Lambert & Suplee, 1997). The instrument most often used is the State Trait Anxiety Inventory (STAI, Spielberger, Gorsuch & Lushene, 1970) and it attempts to give an index of both lasting (trait) and transient (state) anxiety. This interest in the construct of 'anxiety' has given rise to a large number of highly disparate instruments, including, for example, the Taylor Manifest Anxiety Scale (Taylor, 1953) and the IAPT anxiety scale (Scheier & Cattell, 1960).

### ***Scripture and anxiety***

In the Christian tradition there are two different ways of understanding the relationship between anxiety and scripture. The first understanding is one which shows people searching anxiously for something they have lost, for example, the parable of the lost sheep and the parable of the lost coin:

Now all the tax collectors and sinners were coming near to listen to him. And the Pharisees and the scribes were grumbling and saying, This fellow

welcomes sinners and eats with them. So he told them this parable: Which one of you, having a hundred sheep and losing one of them, does not leave the ninety-nine in the wilderness and go after the one that is lost until he finds it? When he has found it, he lays it on his shoulders and rejoices. And when he comes home, he calls together his friends and neighbours, saying to them, 'Rejoice with me, for I have found my sheep that was lost.' Just so, I tell you, there will be more joy in heaven over one sinner who repents than over ninety-nine righteous persons who need no repentance (Luke 15: 1-7).

Or what woman having ten silver coins, if she loses one of them, does not light a lamp, sweep the house, and search carefully until she finds it? When she has found it, she calls together her friends and neighbours, saying, 'Rejoice with me, for I have found the coin that I had lost.' Just so, I tell you, there is joy in the presence of the angels of God over one sinner who repents (Luke 15: 8-10).

The second understanding suggests that religious people, who put their faith in God should show a lower level of anxiety or worry as it is translated in the New Revised Standard Version of the Bible. For example,

Therefore I tell you do not worry about your life, what you shall eat or what you shall drink, or about your body, what you will wear. Is not life more than clothing? (Matthew 6: 25).

But the Lord answered her, 'Martha, Martha you are worried and distracted by many things; there is need of only one thing. Mary has chosen the better part, which will not be taken away from her (Luke 10: 41-42).

The main relationship proposed between anxiety and religion by the Christian Scriptures is one that suggests that religious people who put their faith in God should be less anxious about life because God will provide. It would be expected that clergy who teach the Christian faith should be less anxious than those in the normal population.

### ***Psychological theory***

Freud (1957) believed that religion is an outgrowth of insecurity and anxiety. Freud construed religion as an attempt to resolve the father-child conflict. Religion was presumed to be an outgrowth of insecurity, and God a personification of the father image who ultimately would provide for people's needs and punish them for their misdeeds. Freud (1957) attributed religion to a person's basic insecurity and religion was therefore considered to be a prime symptom of neurosis and a product of a paranoid mind.

### ***Empirical evidence***

There are differing points of view in empirical research as to the role of religion and anxiety. Some studies report that a person is less anxious if religious (Williams & Cole, 1968; Sturgeon & Hamley, 1979; Hertsgaard & Light, 1984; Morris, 1982; Peterson & Roy, 1985). Whilst others report that religious people are more anxious (Wilson & Miller, 1968; Hassan & Khalique, 1981; Luyten, Corveleyn & Fontaine, 1998). There are also some studies that claim there is no relationship between anxiety and religion (Heintzelman & Fehr, 1976; Fehr & Heintzelman, 1977; Frenz & Carey, 1989; Gilk, 1990). Further studies claim that there is both a relationship and no relationship between anxiety and religion (Baker & Gorsuch, 1982; Bergin Masters and Richards, 1987).

The review of literature on anxiety and religion will be split into five sections. The first section will review the literature which says that people are less anxious if religious, the second section will review the literature which states that religious people are more anxious, the third section will review the literature which states that there is no

relationship between anxiety and religion, the fourth section will review the literature which states that anxiety is both related and unrelated to religion and the fifth and final section will review the literature which investigates the relationship between anxiety and those in Christian ministry.

First, Williams and Cole (1968) found that people were less anxious if religious by investigating the relationship between religiosity and generalised anxiety in a sample of 161 students. Four self-report inventories were used: the Religious Participation scale, the Security-Insecurity (S-I) Inventory (Maslow, 1952), the Minnesota Multiphasic Personality Inventory (MMPI, Dahlstrom & Welsh, 1960) and the perception of death scale. The results for the S-I Inventory reveal that for the three-religiosity groups, those in the high and intermediate religious groups did not differ in security levels but that both were significantly ( $p < .001$ ) more secure than the low religiosity group. On all the other dimensions of anxiety, the active religious students manifested the highest level of adjustment.

Sturgeon and Hamley (1979) assessed the relationship between religiosity and anxiety using the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970) to measure trait anxiety and Allport and Ross' (1967) Religious Orientation scale to measure intrinsic and extrinsic religiosity. The results showed that intrinsic individuals had less trait anxiety ( $p < .025$ ).

Hertsgaard and Light (1984) administered the Multiple Affect and Adjective checklist to 760 women residing on farms in a mid-western state to assess the relationship between anxiety, depression, hostility and a number of other variables. They found that women who attended church more than once a month scored lower on anxiety and depression scales than those who attended less often ( $p < .001$ ). Catholic women scored highest on anxiety.

Morris (1982) in his study on the effects of pilgrimage on anxiety, depression and religious attitude administered the State Trait Anxiety Inventory (STAI, Spielberger, Gorsuch & Lushene, 1970); the Depressive Inventory (Beck, Ward, Medelson, Mock & Erbaugh, 1961) and the Religious Attitude Scale (Popleton & Pilkington, 1963) to 11 sick men and 13 sick women. The results showed that there was a significant lessening of both state anxiety and trait anxiety following the visits to Lourdes.

Peterson and Roy (1985) using a sample of 318 people from the Memphis telephone directory found that church attendance had a significantly negative affect on anxiety ( $p < .01$ ). The more people attend church the less anxious they became.

Second Wilson and Miller (1968) found that religious people were more anxious. They used the short form of the Taylor Manifest Anxiety Scale and a number of self rating items commonly associated with religious practices; church attendance, belief in a supreme being religious morality. The results showed that among 100 undergraduates religiousness is positively associated with anxiety ( $p < .05$ ).

Hassan and Khalique (1981) investigated the relationship between religiosity and anxiety among 480 students at Ranchi University. Their results showed a positive correlation between religiosity and anxiety ( $p < 0.1$ ).

Luyten, Corveleyn and Fontaine (1998) conducted a study among 204 undergraduate students who followed an undergraduate course in psychology in 1996 at a Catholic university in Belgium. A number of tests were given to them including a measure of religious involvement. Students were asked if they believed or not, without specifying the content of belief (RB) and they were also asked about religious involvement (RI). Anxiety was measured using the Dutch version of the State-Trait-Anxiety Inventory (STAI: Spielberger, Gorsuch, & Lushene, 1970). The results reveal that state-anxiety correlates positively with religious involvement ( $p < .01$ ) and trait anxiety correlates positively with religious involvement and religious belief ( $p < .01$ ).

Third, Heintzelman and Fehr (1976) administered the Manifest Anxiety Scale and the Brown Modification of the Thouless Test of Religious Orthodoxy to 82 students. The results reveal a non-significant relationship between religion and anxiety.

Fehr and Heintzelman (1977) in a paper titled 'Personality and attitude correlates of religiosity: a source of controversy' investigated the relationship between two measures of religiosity and anxiety, self-esteem, authoritarianism and humanitarianism. The results showed a nonsignificant relationship between the Manifest anxiety scale and Allport-Vernon-Lindzey study of values and the Brown Modification of the Thouless Test of Religious Orthodoxy.

Frenz and Carey (1989) investigated the relationship between religiousness and trait anxiety among 175 undergraduate students enrolled in a private university in New York. Religiousness was measured using Allport and Ross' (1967) extrinsic and intrinsic scale of religiosity. Trait anxiety was measured by the State-Trait Anxiety Inventory (Spielberger, Gorsuch & Lushene, 1970). The results gave no evidence for a relationship between religiousness and trait anxiety.

Gilk (1990) used survey data to examine the relationship between religiosity and psychological distress among persons in Christian Charismatic (n=83), 'New Age,' 'metaphysical' healing groups (n=93), and a comparison group of medical patients (n=137). A number of scales were used, including a 19-item Index of Spiritual Orientation, based on Sorokin's (1947) theory of cultural value systems, which was developed to reflect Ideational or Mystical beliefs, knowledge, and values. Also subscales of the Brief Symptom Inventory (BSI, Derogatis & Melisaratos, 1983) which included anxiety. The results revealed no correlation between ideational beliefs and anxiety.

Fourth, Baker and Gorsuch (1982) used Allport and Ross' (1967) Intrinsic-Extrinsic measure of religious orientation and the IAPT Anxiety Scale (Scheier & Cattell, 1960) among 52 subjects. They found that trait anxiety was negatively correlated with intrinsic scores ( $p < .05$ ) and positively correlated with extrinsic scores ( $p < .01$ ).

Bergin, Masters and Richards (1987) used the Taylor Manifest Anxiety Scale (Taylor, 1953) to measure anxiety and the Allport and Ross' (1967) Religious Orientation scale to measure intrinsic and extrinsic religiosity. They found that intrinsic religiosity correlates negatively ( $p < .05$ ) with anxiety, whereas extrinsic scores correlated positively ( $p < .05$ ) with anxiety.

Fifth, the research into clergy and anxiety show the same conflicting results. There are studies that report people in ministry are more anxious than people in the general population (Wilson, 1974; Scordato, 1975; Stewart, 1990) and there are studies that report people in ministry are less anxious (Nauss, 1972b; Pallone & Banks, 1968; Godwin, 1989).

Wilson (1974) administered the 16PF to 100 Roman Catholic priests in the United States of America. The results showed that these Roman Catholic priests score higher on the factor Q4 and are more worried, tense, and anxious than men in general.

Scordato (1975) administered the 16PF to 129 seminary persisters in the United States of America. The results showed that these seminarians scored higher on the factor Q4 and are more worried, tense, and anxious than men in general.

Stewart (1990) administered the 16PF to 54 Protestant ministers in The United States of America. The results showed that these Protestant ministers score higher on the factor Q4 and are more worried, tense, and anxious than men in general.

Nauss (1972b) administered the 16PF to 242 graduating seminarians from Springfield, Illinois. The results showed that these seminarians scored lower on the factor Q4 and are more relaxed and calm.

Pallone and Banks (1968) administered the 16PF to 21 Seventh-day Adventists from a seminary in North America. The results showed that these Seventh-day Adventists score lower on the factor Q4 and are more relaxed and calm.

Godwin (1989) administered the 16PF to 252 new staff applicants for the Campus Crusade for Christ in the United States of America. The results showed that these applicants scored lower on the factor Q4 and are more relaxed and calm.

Schaefer and Gorsuch (1991) administered a number of scales to measure psychological adjustment and religiousness to 161 students. The results show that anxiety as measured by the trait portion of the State-Trait Anxiety Inventory (STAI, Spielberger, Gorsuch & Lushene, 1970) was negatively related to a benevolent understanding of God ( $p < .05$ ).

One other study looks at theological issues and anxiety (Harbaugh & Rogers, 1984) and clergy burnout and anxiety (Fichter, 1984). Harbaugh and Rogers (1984) report on a Pace study in which 144 Seminarians responded to the Holmes-Rahe stress scale (1967), a holistic questionnaire, and other tests measuring both state and trait anxiety. The results show that persons who usually perceive change as a challenge and opportunity, rather

than as an obstacle or a danger, had significantly lower situational anxiety levels ( $p < .03$ ) and personality trait anxiety ( $p < .0001$ ) even though they had as many life changes as others on the Holmes-Rahe Scale. Those for whom Christ is a 'very real presence' in stressful times had significantly lower State (situational) anxiety and very significantly lower Trait (personality) anxiety ( $p < .0001$ ).

Fichter (1984) investigated the myth of clergy burnout among 4,660 Catholic priests. The results show that only a minority of priests say they 'often' have the following symptoms: worried about things (18.7%) or were tense and nervous (16.5%).

### ***Hypothesis***

The link between religion and anxiety at least within the Christian tradition is ambivalent. The Christian scriptures suggest that religious people who put their faith in God should be less anxious as God will provide for them. Psychological theory suggests that religion is an outgrowth of insecurity and anxiety (Freud, 1957) as a consequence religious people would be more anxious. The empirical evidence suggests that there is no clear view as to whether having a religious faith makes you more or less anxious. One group of studies suggests that religious people are less anxious (Williams & Cole, 1968), whilst another group suggests that religious people are more anxious (Luyten, Corveleyn & Fontaine, 1998). Research amongst clergy also suggests that clergy are less anxious (Nauss, 1972b) and more anxious (Wilson, 1974). On balance, however, it would seem that religious people and clergy in particular should be less anxious. It is hypothesised, therefore, that clergy in this sample would be less anxious than people in the normal population.

### ***Scale Properties***

Table 8.7 reports on the reliability of the 20 item index of anxiety and gives the item rest of scale correlations. The anxiety scale achieved an alpha coefficient of .83 for male clergy and .81 for female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the findings***

Table 8.8 presents the mean scale scores on the index of anxiety for male and female clergy separately and compares the scores with the norms provided in the test manual. These data demonstrate that male clergy record significantly higher scores on the scale of anxiety than men in the normal population. Women in the normal population, however, record significantly higher scores on the scale of anxiety than female clergy. Women in the normal population record significantly higher scores on the scale of anxiety than men in the normal population. There was no significant difference between male and female clergy on the scale of anxiety.

These data demonstrate that male clergy are more anxious than the men in the normal population, that female clergy are less anxious than the women in the normal population and that there is no significant difference between male and female clergy.

Table 8.9 penetrates behind the overall mean scores recorded on the index of anxiety to

examine the percentage of male and female clergy who endorse the individual items.

Table 8.7 Anxiety (anxious/calm) reliability analysis

	Item rest of scale correlation	
	Male	Female
Are you inclined to get yourself all worked up over nothing?	0.5635	0.5326
Are you easily embarrassed in a social situation?	0.3836	0.3576
Is life often a strain for you?	0.4903	0.4842
Do you often worry unreasonably over things that do not really matter?	0.6086	0.5660
Are you often afraid of things and people that you know would not really hurt you?	0.3554	0.3752
Are you inclined to tremble and perspire if you are faced with a difficult task ahead?	0.3866	0.3303
Are you usually calm and not easily upset?	0.4231	0.3756
Do you worry unnecessarily over things that might happen?	0.5997	0.4946
Do you worry too long over humiliating experiences?	0.4822	0.4332
Do you sometimes get into a state of tension and turmoil when thinking over your difficulties?	0.4967	0.4297
Do you find it difficult to sit still without fidgeting?	0.1788	0.1528
Have you ever felt you needed to take a very long holiday?	0.1980	0.1448
Does your voice get shaky if you are talking to someone you particularly want to impress?	0.2945	0.4037
Do you sometimes feel that you have so many difficulties that you cannot possibly overcome them?	0.4302	0.4304
Do you often wake up sweating after having a bad dream?	0.2194	0.2322
Are you easily annoyed if things don't go according to plan?	0.3731	0.3975
Do you blush more often than most people?	0.2607	0.2328
Do you often feel restless as though you want something but do not really know what?	0.4335	0.3372
Are you anxious about something or somebody most of the time?	0.5167	0.5477
Are you a nervous person?	0.5204	0.4160
Alpha	0.8341	0.8140

These data demonstrate that under a half of male clergy feel that they worry too long over

humiliating experiences (45%), sometimes get into a state of tension and turmoil when thinking over difficulties (47%) and are easily annoyed if things don't go according to plan (46%). Nearly two-thirds of male clergy have felt that they needed to take a very long holiday (65%). On the other hand, only a fifth of male clergy are inclined to get themselves all worked up over nothing (21%) and are anxious about something or somebody most of the time (19%). Just over four-fifths are usually calm and not easily upset (81%).

Table 8.8 Mean scale scores (for men and women compared with population norms)

Sex	clergy		norms	
	mean	sd	mean	sd
Male	11.82	7.82	9.85	7.87
Female	12.32	7.59	13.45	8.94

Male clergy/female clergy,	t = 1.223	p < NS
Male clergy/male norms,	t = 5.234	p < .001
Female clergy/female norms,	t = 2.329	p < .01
Male norms/female norms	t = 7.980	p < .001

Well over a half of female clergy feel that they worry too long over humiliating experiences (56%), and sometimes get into a state of tension and turmoil when thinking over difficulties (58%). Nearly two-thirds of female clergy have felt that they needed to take a very long holiday (64%). On the other hand, only a fifth of female clergy are inclined to get themselves all worked up over nothing (21%), are inclined to tremble and perspire if faced with a difficult task (21%) and are anxious about something or somebody most of the time (23%). Just over three-quarters of female clergy are usually calm and not easily upset (76%).

Table 8.9 Percentage endorsement of the twenty items of the index of anxiety (anxious/calm) for male and female clergy

	Male %	Female %
Are you inclined to get yourself all worked up over nothing?	21	21
Are you easily embarrassed in a social situation?	25	28
Is life often a strain for you?	20	25
Do you often worry unreasonably over things that do not really matter?	29	28
Are you often afraid of things and people that you know would not really hurt you?	6	9
Are you inclined to tremble and perspire if you are faced with a difficult task ahead?	16	21
Are you usually calm and not easily upset?	81	76
Do you worry unnecessarily over things that might happen?	28	29
Do you worry too long over humiliating experiences?	45	56
Do you sometimes get into a state of tension and turmoil when thinking over your difficulties?	47	58
Do you find it difficult to sit still without fidgeting?	33	20
Have you ever felt you needed to take a very long holiday?	65	64
Does your voice get shaky if you are talking to someone you particularly want to impress?	14	12
Do you sometimes feel that you have so many difficulties that you cannot possibly overcome them?	11	11
Do you often wake up sweating after having a bad dream?	6	7
Are you easily annoyed if things don't go according to plan?	46	34
Do you blush more often than most people?	11	19
Do you often feel restless as though you want something but do not really know what?	29	29
Are you anxious about something or somebody most of the time?	19	23
Are you a nervous person?	13	12

### ***Conclusion***

These data demonstrate that male clergy score significantly higher on the anxiety scale than men in the normal population. Female clergy, however, score significantly lower on

the scale of anxiety than women in the normal population. These mixed findings are consistent with research using the 16PF (Cattell, Eber & Tatsuoka, 1970) among those in training for ministry or those in ministry. Research findings report that people involved in ministry are less anxious (Nauss, 1972b; Pallone & Banks, 1968; Goodwin, 1989) and that they are more anxious (Wilson, 1974; Scordato, 1975; Steward, 1990). These data also show that there is no significant difference between male and female clergy.

## **Dependency (dependency/autonomy)**

### ***Definition***

The fourth construct proposed by the Eysenck Personality Profiler within the higher order dimension of neuroticism is anchored by the opposite poles ‘dependency’ and ‘autonomy’. In their original formulation Eysenck and Wilson (1976) describe this construct as autonomy and offer the following definition:

the autonomous person (high scorer) enjoys a great deal of freedom and independence, makes his own decisions, views himself as the master of his own fate and takes realistic action to solve his problems. The low scorer lacks self-reliance, thinks of himself as a helpless pawn of fate, is pushed around by other people and events, and shows a high degree of what has been called ‘authoritarian submission’ - the unquestioning obedience to institutional power.

There is very little research into the construct autonomy or dependency as an individual construct but autonomy is part of personality scales like for example, the Edwards Personal Preference Scale (Edwards, 1957), Cattell’s 16PF (Cattell, Eber & Tatsuoka, 1970) the California Psychological Inventory (Gough, 1975).

## ***Scripture and dependency***

In the Christian scriptures there are two ways of understanding the relationship between dependency and Scripture. The first understanding is one which suggests that we are members together of one body. Paul in 1 Corinthians 12 gives a clear message about the Christian being part of the body of Christ and being dependent on others who are part of the body of Christ:

For just as the body is one and has many members, and all the members of the one body, though many, are one body so it is with Christ. For in the one Spirit we were all baptised into one body, Jews or Greeks, slaves or free and we were all made to drink of one spirit (1 Corinthians 12:12-14).

Also Jesus sends out the disciples in pairs:

Then he went about among the villages teaching. He called the twelve and began to send them out two by two, and gave them authority over the unclean spirits. He ordered them to take nothing for their journey except a staff; no bread, no bag, no money in their belts; but to wear sandals and not to put on two tunics. He said to them, 'Wherever you enter a house, stay there until you leave the place. If any place will not welcome you and they refuse to hear you, as you leave, shake off the dust that is on your feet as a testimony against them.' So they went out and proclaimed that all should repent. They cast out many demons, and anointed with oil many who were sick and cured them (Mark 6: 6-13).

The second understanding suggests that there are times when people enjoy their uniqueness and their own independence. Take the example of John the Baptist:

As it is written in the prophet Isaiah. 'See, I am sending my messenger ahead of you, who will prepare your way; the voice of one crying out in the wilderness:

Prepare the way of the Lord,  
make his paths straight,'

John the baptizer appeared in the wilderness, proclaiming a baptism of repentance for the forgiveness of sins. And people from the whole Judean countryside and all the people of Jerusalem were going out to him, and were baptized by him in the river Jordan, confessing their sins. Now John was clothed with camel's hair, with a leather belt around his waist, and he

ate locusts and wild honey. He proclaimed, 'The one who is more powerful than I is coming after me; I am not worthy to stoop down and untie the thong of his sandals. I have baptized you with water; but he will baptize you with the Holy Spirit.'

Jesus operates on his own at times especially in the Gospel of Mark where Jesus keeps from his disciples who he really is:

Jesus went on with his disciples to the villages of Caesarea Philippi; and on the way he asked his disciples, 'Who do people say that I am?' And they answered him, 'John the Baptist; and others, Elijah; and still others, one of the prophets.' He asked them, 'But who do you say that I am?' Peter answered him, 'You are the Messiah.' And he sternly ordered them not to tell anyone about him (Mark 8: 27-30).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of Christian people being both dependent and autonomous.

### ***Psychological theory***

White (1988) suggests that healthy religion fosters a harmonious balance between dependency and independency in a way that 'allows interdependency through developing and maintaining one's individual identity, and yet experiencing a sense of oneness with others.'

Overdependency can result in enmeshed relationships that deprive persons of growth in their own uniqueness. Freud (1950b) described religious involvement as an immature way in which people deal with their needs, a form of infantile dependence. There has, however, been very little research undertaken in the area of religion and dependency what

research there is has occurred as a result of research into the wider area of religion and personality. One of the problems with this research has been the variety of personality scales used, there has been no consistent research using one scale to determine religion and personality. In the papers cited there are three different personality scales used and various methods have been used to determine a person's religion.

### *Empirical Evidence*

Tennison and Snyder (1968) investigated attitudes to the church and certain personality characteristics among 299 college students. The Thurstone and Chave Scale for measuring attitudes to the church (TCS, Thurstone & Chave, 1929) and the Kirpatrick Religiosity Scale (KRS: Kirpatrick, 1949) were used to assess varying degrees of favourable attitudes toward the church. The Edwards Personal Preference Scale (Edwards, 1954) was used to assess the psychological needs of the students. The results show a negative correlation between the Edwards Personal Preference Scale variable autonomy and the mean religiosity index ( $p < .01$ ). There is therefore a negative relationship between dependency and committed religiosity.

Bergin, Masters and Richards (1987) used Allport and Ross' (1967) Religious Orientation scale to measure intrinsic and extrinsic religiosity and the California Psychological Inventory (Gouch, 1975) to assess the relationship between religiosity and certain personality variables. Dependency is one of the traits of the California Psychological Inventory (Gouch, 1975) and Bergin, Masters and Richards (1987) found no relationship between dependency and intrinsic or extrinsic religiosity.

The research available in relation to the clergy and dependency also comes from the wider issue of personality and the clergy. Chalmers (1969) administered the 16PF to 35 more effective Seventh-day Adventist ministers and to 35 less effective Seventh-day Adventist ministers in the United States of America. The results show that these ministers score higher on the scale of self-sufficiency than men in general.

Wilson (1974) administered the 16PF to 100 Roman Catholic priests in the United States of America. The results showed that these Roman Catholic priests score higher on the scale of self-sufficiency than men in general.

Pallone and Banks (1968) administered the 16PF to 21 Seventh-day Adventists from a seminary in North America. The results showed that these Seventh-day Adventists score higher on the scale of self-sufficiency than men in general.

Stewart (1990) administered the 16PF to 54 protestant ministers in the United States of America. The results showed that these protestant ministers score higher on the scale of self-sufficiency than men in general.

Godwin (1989) administered the 16PF to 252 new staff applicants for the Campus Crusade for Christ in the United States of America. The results showed that these applicants scored lower on the dependency scale and are therefore more group dependent.

Thorson (1992) makes a comparison between three studies that have used the Edwards Personal Preference Schedule (Edwards, 1959). These studies include Patrick (1991), Edwards (1959) and Thorson and Powell (1988, 1991). The results show that male pastoral candidates score significantly lower on the autonomy scale than college norms ( $p < .01$ ) and medical students ( $p < .02$ ). Female pastoral candidates on the other hand, score significantly lower on autonomy than medical students ( $p < .01$ ).

Musson (1998) administered the 16PF (Cattell, Eber, & Tatsuoka, 1970) questionnaire to 441 male Anglican clergy of the Church of England. The results showed that clergymen were more group dependent than the normal population ( $P < .001$ ).

### ***Hypothesis***

The link between religion and dependency is ambivalent. The Christian scriptures suggest that there are times when a person should be dependent and there are times when they should be autonomous. Psychological theory also suggests that there should be a harmonious balance between dependency and independency (White, 1988). The empirical evidence suggests that religious people are both autonomous (Tennison & Snyder, 1968) and dependent (Godwin, 1989). Where ministers of religion are concerned American research has generally found that clergy are more self-sufficient (Stewart, 1990) whilst, the British research has found that clergy are more dependent (Musson, 1998). In view of this, it is hypothesised that clergy in this sample would be more group dependent.

### ***Scale Properties***

Table 8.10 reports on the reliability of the 20 item index of dependency and gives the item rest of scale correlations. The dependency scale achieved an alpha coefficient of .72 for the male clergy and .66 for the female clergy. The alpha coefficient for the males is above the .70 marker given by Kline (1993) but for the women it is below the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the findings***

Table 8.11 presents the mean scale scores on the index of dependency for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate that male clergy score significantly higher on the scale of dependency than men in population norms. Male clergy are therefore more dependent than men in the normal population. The females in the normal population score significantly higher on the scale of dependency than the female clergy. Female clergy are therefore less dependent and more autonomous. There is no significant difference between male and female clergy on the scale of dependency. Females in the normal population score significantly higher on the dependency scale than males in the general population. Females are therefore more dependent than the men in the normal population.

In summary male clergy are more dependent than men in the general population and female clergy are more autonomous than females in the normal population. There is however, no significant difference between male and female clergy.

Table 8. 10 Dependency (dependance/automomy) reliability analysis

	Item rest of scale correlation	
	Male	Female
Have you as much willpower as the next person?	0.2202	0.1957
Do you often feel that you don't have enough control over the direction your life is taking?	0.4573	0.4785
Have you ever felt as though you were possessed by evil spirits?	0.0735	0.1010
Do you find that things are changing so fast today that it is difficult to know what rules to follow?	0.3518	0.1809
If something goes wrong do you usually attribute it to bad luck rather than bad management?	0.1806	0.0666
Do you often feel that you have little influence over the things that happen to you?	0.4878	0.4084
Do you believe your personality was shaped by childhood experiences so that there isn't much you can do to change it?	0.3142	0.2813
Do you often have the feeling that other people are using you?	0.4102	0.2982
Do you ever make decisions by tossing a coin or some such procedure that leaves it entirely to chance?	0.0662	-0.0010
Do you often feel that you are a victim of outside forces that you cannot control?	0.4480	0.4289
Would you prefer a job in which somebody else made the decisions and told you what to do?	0.3293	0.2459
Do you read horoscopes with the hope of obtaining some guidance in your life?	0.1493	0.1060
Do you find it a waste of time planning ahead because something always turns up that causes you to change your plans?	0.2326	0.1754
Do other people usually decide what play or film you are going to see?	0.1730	0.2207
Do you usually have clear aims and a sense of purpose in life?	0.2891	0.2308
Are you easily persuaded by the arguments of other people?	0.2943	0.2795
Are most of the things you do geared to pleasing other people?	0.2602	0.3280
Do you often find life difficult to cope with?	0.4312	0.3930
Do you often get the feeling that it's no use trying to get anywhere in life?	0.4129	0.2864
If you see a game that you would like to be good at are you usually able to acquire the necessary skill to enjoy it?	0.1561	0.0617
<b>Alpha</b>	<b>0.7177</b>	<b>0.6591</b>

Table 8.11 Mean scale scores (for men and women compared with population norms)

Sex	clergy		norms	
	mean	sd	mean	sd
Male	8.55	5.54	7.87	5.99
Female	8.68	5.01	9.59	6.83

Male clergy/female clergy,	t = 0.458	p< NS
Male clergy/male norms,	t = 2.478	p< .01
Female clergy/female norms,	t = 2.572	p< .01
Male norms/female norms	t = 4.999	p< .001

Table 8.12 penetrates behind the overall mean scores recorded by the index of dependency to examine the percentage of male and female clergy who endorse the individual items. The data demonstrate that four-fifths of male clergy were not easily persuaded by the arguments of other people (82%), feel that they have enough control over the direction their life is taking (81%), and feel that they have a lot of influence over the things that happen to them (80%). Over three-quarters of male clergy usually have a clear aim and sense of purpose in life (77%) and two-thirds of male clergy feel that they have as much willpower as the next person (67%).

On the other hand, almost two-fifths of male clergy feel that most of the things they do are geared to pleasing other people (38%) and a quarter of male clergy feel that other people are using them (25%). Less than one-fifth of male clergy believe that their personality was shaped by childhood experiences (15%) and make decisions by tossing a coin (15%).

Table 8.12 Percentage endorsement of the twenty items of the index of dependency (dependence/autonomy) for male and female clergy

	Male %	Female %
Have you as much willpower as the next person?	67	68
Do you often feel that you don't have enough control over the direction your life is taking?	19	20
Have you ever felt as though you were possessed by evil spirits?	6	4
Do you find that things are changing so fast today that it is difficult to know what rules to follow?	16	12
If something goes wrong do you usually attribute it to bad luck rather than bad management?	11	5
Do you often feel that you have little influence over the things that happen to you?	20	17
Do you believe your personality was shaped by childhood experiences so that there isn't much you can do to change it?	15	11
Do you often have the feeling that other people are using you?	25	27
Do you ever make decisions by tossing a coin or some such procedure that leaves it entirely to chance?	15	15
Do you often feel that you are a victim of outside forces that you cannot control?	10	10
Would you prefer a job in which somebody else made the decisions and told you what to do?	9	10
Do you read horoscopes with the hope of obtaining some guidance in your life?	1	2
Do you find it a waste of time planning ahead because something always turns up that causes you to change your plans?	3	5
Do other people usually decide what play or film you are going to see?	17	18
Do you usually have clear aims and a sense of purpose in life?	77	80
Are you easily persuaded by the arguments of other people?	18	24
Are most of the things you do geared to pleasing other people?	38	47
Do you often find life difficult to cope with?	10	14
Do you often get the feeling that it's no use trying to get anywhere in life?	5	4
If you see a game that you would like to be good at are you usually able to acquire the necessary skill to enjoy it?	40	28

The data also demonstrate that four-fifths of female clergy usually have a clear aim and sense of purpose in life (80%) that they have enough control over the direction their life is taking (80%), and feel that they have a lot of influence over the things that happen to

them (83%). Around two-thirds of female clergy feel that they have as much willpower as the next person (68%) and three-quarters of female clergy are not easily persuaded by the arguments of other people (76%).

On the other hand, nearly a half of female clergy feel that most of the things they do are geared to pleasing other people (47%) and a quarter of female clergy feel that other people are using them (27%). Less than one-fifth of female clergy believe that their personality was shaped by childhood experiences (11%) and make decisions by tossing a coin (15%).

### ***Conclusion***

These data demonstrate that male clergy are more dependent than the normal population this finding is consistent with previous research amongst those in some form of ministry when using Cattells 16PF (Godwin, 1989; Musson, 1998). Female clergy are more autonomous and than the normal population and this finding is consistent with previous research amongst those in some form of ministry when using Cattells 16PF (Chalmers, 1969; Wilson, 1974; Pallone & Banks, 1968; Stewart 1990).

## **Hypochondriasis (hypochondria/sense of health)**

### ***Definition***

The fifth construct proposed by the Eysenck Personality Profiler within the higher order dimension of neuroticism is anchored by the opposing poles 'hypochondria' and 'sense of

health'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'hypochondriasis' and offer the following definition:

hypochondriasis measures a tendency to acquire the psychosomatic symptoms and imagine that one is ill. High scorers complain of a wide variety of diffuse physical symptoms, show a great deal of concern about their state of health, and frequently demand the sympathetic attention of their doctor and their family and friends. Low scorers are very seldom ill and do not worry very much about their health. It is just possible that a high score on this scale could be obtained by an individual who is genuinely very sick physically, but the variety of symptoms sampled makes this extremely unlikely.

The construct 'hypochondriasis' or health has long been of interest to psychologists and there is a vast amount of research which investigates the relationship between religion and health.

### ***Scripture and hypochondriasis***

Health and wholeness feature widely within the Biblical tradition. Throughout the Bible health and healing are perceived as the works of God and His son. In all three sections of the Jewish scriptures, the image of Yahweh as healer is present as a central aspect of God's relationship with his covenant people:

He said, 'If you will listen carefully to the voice of the Lord your God, and do what is right in his sight, and give heed to his commandments and keep all his statutes, I will not bring upon you any of the diseases that I brought upon the Egyptians; for I am the Lord who heals you' (Exodus, 15:26).

Within these scriptures the Jews tended to believe that God could punish with sickness and reward with health (Job, 5:18).

In the New Testament the healing power of Jesus is vividly portrayed in all four Gospels, (Matthew 8:16f; Mark, 2:1f; Luke, 8:48f; John 4:46f).

When Jesus entered Peter's house, he saw his mother-in-law lying in bed with a fever; he touched her hand, and the fever left her, and she got up and began to serve him. That evening they brought to him many who were possessed with demons; and he cast out the spirits with a word, and cured all who were sick. This was to fulfill what had been spoken through the prophet Isaiah, 'He took our infirmities and bore our diseases' (Matthew 8: 14-16).

In the healing stories, the response of faith is essential in order for the healing to occur, whether that faith is resident in the victim or in some person or persons who are hoping for a cure of a friend or relative. There is in the Christian scriptures no link with hypochondriasis and so it would be expected that those people who have a religious faith would have a tendency to be more healthy and whole than those who do not have a Christian faith.

### ***Psychological theory***

This relationship between health and faith continues to be an important one and scholars from diverse disciplines have speculated over many years about the effects of religion on human health and well-being. These include theologians such as Paul Tillich (1981), philosophers such as William James (1902), and psychologists such as Abraham Maslow (1964). Although these scholars agree that religion exerts a profound influence on health, they disagree as to whether religion has mostly a good or bad effect on health.

The consequence of religion on health has also become an important part of the sociologists' research over the past few decades. Among the pioneering social scientists,

Freud, Jung and Marx generally described religion's effect on human life and mental functioning as negative, for example Freud saw religion as reflective of neurosis. By contrast, Jung described the effects of religion as beneficial to both personal wellbeing and social life. This difference of opinion as to whether religion has a positive, negative, or nil effect on health and wellbeing in adulthood continues. Interest in the implications of religion and spirituality for physical and mental health has grown rapidly in recent years (Ellison, 1998). In the late 1980s a series of review articles examined the evidence concerning religious effects on a wide range of physical outcomes, including heart disease, hypertension, stroke, cancers and others, as well as overall self-rated health, physical disability, self-reported symptoms and mortality risk (Jarvis & Northcott, 1987; Levin & Vanderpool, 1987). Those reviews revealed considerable evidence that rates of morbidity and mortality vary across religions and religious denominations and across levels of religious involvement.

A long tradition of theory and research has also focused on the relationship between aspects of religious involvement and mental health, as assessed via personality variables, psychological well-being, distress, depression anxiety, and clinical or simulated diagnoses of various psychiatric disorders. While the empirical findings are not unequivocal, systematic reviews of these studies have consistently reported that various aspects of religious involvement are linked with desirable mental health outcomes (Larson, Sherill, Lyons, Craigie, Thielman, Greenworld, & Larson, 1992, Levin & Chatters, 1998).

## ***Empirical Evidence***

The area of research into religion and health is vast and as a consequence the review of literature proposed is limited. The review of literature will be split into five distinct areas and will not cover the whole field of research. The first area to be reviewed will include articles that have reviewed work undertaken in the area of health and religion, the second area will include a selection of research articles that have investigated the relationship between, religion and physical health, the third area will include a selection of research into religion and depression, and the fourth area will include a selection of research on mental health and religion. The fifth and final area will include research into health and the clergy.

First, review of research into religion and health. Historically researchers in health related issues have included a measure of religiosity in their research projects and a review of this literature has discovered over 250 such studies dating back to the early nineteenth century (Levin & Schiller, 1987).

Levin and his associates have over a number of years reviewed articles published in relation to religion and health. In their initial review of published findings, Levin and Schiller (1987) found that, generally speaking, religiosity, however operationalised, seems to exert a salutary effect on health. While there were exceptions and while many of these studies had not been designed to focus specifically on religion, they have also found that more conservative and strict religions or denominations like Mormons, Seventh-day Adventists, Orthodox Jews, and clergy of all denominations have lower risk of

cardiovascular disease, hypertension, stroke, uterine and cervical cancer, numerous other cancer sites, colitis and enteritis.

Levin and Vanderpool (1987) reviewed twenty-seven research papers which operationalise 'religiosity' as religious attendance. They found several pervasive epistemological, methodological and analytical problems with these studies and concluded that there is insufficient evidence to prove that religious attendance is positively and significantly related to health.

Schiller and Levin (1988) review more than 30 studies of health care utilisation in which the effects of religious variables are examined. The authors found that over three-quarters of these studies reported significant religious differences in rates of utilisation. The most common operationalisation of religion was religious affiliation, although the effects of religious attendance and religiosity were examined. The authors concluded that despite the large amount of significant findings, it is difficult to isolate any consistent trends.

Levin (1994) continues the review and asks if there is an association between religion and health, is it valid and is it causal? Evidence presented in this paper suggests that the answers to the respective questions are 'yes', 'probably' and 'maybe'. He then argues that further research is needed to clarify the association between religion and health.

Kaplan (1976) in his paper on religious belief and coronary care reviews the literature and comes to the conclusion that researchers need to refine what is meant by the concept religion and that they need to perfect the methodologies in order to see if in fact, specific religious processes are related to the etiology, precipitation, recovery, or prevention of heart disease.

Troyer (1988) has reviewed research undertaken among four religious sects and the occurrence of various types of cancer. All four religious groups considered have reduced overall rates of cancer, suggesting that the life-styles of all four groups have merit in terms of reducing the overall risk of cancer.

Mullen (1990) has reviewed the literature concerning religion and health and concludes that most research has been carried out on only a few religious groupings and therefore recommends that more research is needed.

Matthews, McCullough, Larson, Koenig, Swyers and Milano (1998) undertook a review of research undertaken in the area of religious commitment and health status. They found that a large proportion of published empirical data suggest that religious commitment may play a beneficial role in preventing mental and physical illness, improving how people cope with mental and physical illness, and facilitating recovery from illness.

Shatenstein and Ghadirian (1998) have reviewed research undertaken in the area of diet, lifestyle and health outcomes in selected religious groups.

The following findings are drawn from the literature reviews cited above and discuss three areas, cardiovascular diseases, cancer and all-cause mortality. First in respect of rates of coronary heart disease when compared with rates amongst the general population lower rates have been found for Seventh-day Adventists (Phillips, Lemon, Beeson & Kuzma, 1978; Phillips, Kuzma, Beeson & Lotz, 1980; Fraser, Sabete', Beeson & Strahan,

1992); and Mormons (Jarvis, 1977; Lyon, Wetzler, Gardner, Klauber & Williams, 1978). Lower rates of coronary heart disease have been found for Protestants and Catholics in comparison with Jews (Friedman & Hellerstein, 1968; Shapiro, Weinblatt, Frank & Sager, 1969); and for orthodox Jews in comparison with non-religious Jews (Snyder, Goldbourt, Medalie, Neufeld & Oron, 1978). Protestants have been found to be at greater risk of suffering myocardial infarction than Catholics (Wardwell, Bahnson & Caron, 1963; Winkelstein & ReKate, 1964; Wardwell, Hyman & Bahnson, 1968); orthodox Jews have a decreased risk of heart attack compared with less religious Jews (Medalie, Kahn, Neufeld, Riss & Goldbourt, 1973; Friedlander, Kark & Stein, 1986; Goldbourt, Yaari & Medalie, 1993); and Seventh-day Adventist males were found to be at lower risk of heart attack than the general population (Wynder, Lemon & Bross, 1959). Higher cholesterol levels have been found in Jews compared with non-Jews (Schaefer, Drachman, Steinberg & Adlersberg, 1953), but in Italian Catholics compared with New York Jews (Epstein, Carol & Simpson, 1956); a sample of young Buddhists were found to have low cholesterol levels (Pan, Chin, Sheu & Lee, 1993). In terms of general mortality from circulatory diseases, the Amish appear especially resilient (Hamman, Barancik & Lilienfeld, 1981; Fuchs, Levinson, Stoddard, Mullet & Jones, 1990). Skyring, Modan, Crocetti and Hammerstrom (1963) found death from coronary heart disease to be unrelated to religious affiliation.

In respect of cancer, Levin and Schiller (1987) in their review which included studies whose primary focus was not on the relationship between religion and health list 19 studies published between 1931 and 1964 which found Jews to be 'strongly protected'

against uterine and cervical cancer. However, some denominations within Judaism were found to be at greater risk than others from these diseases. Koenig (1997) draws attention to four studies which find Jewish women and Jewish men to be differentially at greater risk from certain cancers compared with the general population. Actual death from cancer at any site is, according to Levin and Schiller (1987), more likely amongst Jews than Protestants, but less likely amongst Jews than Catholics, and less likely amongst Hutterites, Amish, Mormons, Reorganised Latter-Day Saints, and Seventh-day Adventists. Muslims and Parsis are at a reduced risk of contracting uterine or cervical cancer. Koenig (1997) filters out 16 studies specifically concerned with the relationship between disease and a particular religious group and finds lower rates of cancer amongst Mormons (in Enstrom, 1975; Lyon, Klauber, Gardner & Smart, 1976; Jarvis, 1977; Lyon, Gardner, Klauber & Smart, 1977; Enstrom, 1978), Seventh-day Adventists (in Phillips, Kuzma, Beeson & Lotz, 1980; Phillips & Snowdon, 1983; Berkel & deWaard, 1983; Zollinger, Phillips & Kuzma, 1984), Hutterites (in Martin, Dunn, Simpson, Olsen, Kemel, Grace, Elias, Sarto, Smalley & Steinberg, 1980), and Amish (in Hamman, Barancik & Lilienfeld, 1981) compared with the general population. Mullen (1990) draws attention to the findings of Wydner, Lemon and Bross (1959) demonstrating incidence of cancer of the lung, mouth, larynx and esophagus to be eight times lower than expected amongst Seventh-day Adventists, and Jensen (1983) finds a lower incidence of these types of cancer amongst Seventh-day Adventists in Denmark. Troyer (1988) has compared a selection of studies examining cancer incidence rates in Hutterites, Seventh-day Adventists, Mormons and Amish and found equivocal results.

Although concluding that all four religious groups had reduced rates of all-site cancers when contrasted with the control groups used, he found the differences to be marginal or reversed in relation to some specific cancers. For example, more Amish women died from stomach cancer than non-Amish, and Seventh-day Adventists were only slightly, or not at all, significantly protected from stomach cancer mortality. Mormon men were found to be at significantly greater risk of prostate cancer than the control group (Enstrom, 1978). Whilst breast cancer incidence was no higher for Hutterites than non-Hutterites in Alberta (Gaudette, Holmes, Laing, Morgan & Grace, 1978), death from breast cancer was found to be higher in three Hutterite groups (Martin, Dunn, Simpson, Olsen, Kemel, Grace, Elias, Sarto, Smalley & Steinberg, 1980).

Third, all-cause mortality, lower all-cause mortality for certain religious groups has been found in a variety of geographic locations: in Poland amongst male and female Seventh-day Adventists aged over 40 (Jedrychowski, Tobiasz-Adamczyk, Olma & Gradzikiewicz, 1985); in Japan amongst Zen Buddhist Priests (Ogata, Ikeda & Kuratsune, 1984) and amongst Seventh-day Adventists (Kuratsune, Ikeda & Hayashi, 1986); in the United States amongst Seventh-day Adventists (Snowdon, 1988); in the Netherlands amongst Seventh-day Adventists (Berkel & de Waard, 1983). In eastern Finland, Rasanen, Kauhanen, Lakka, Kaplan & Salonen (1996) found men affiliated with the Eastern Orthodox church have 'considerably higher' rates of all-cause mortality than men affiliated with the Lutheran church and those with no religious affiliation.

The second area to be reviewed is individual articles on religion and physical health. Comstock and Partridge (1972) investigated the relationship between church attendance

and health. They used the data from the 1963 Washington Census and found that frequency of church attendance is associated with death rates. Less people died from arteriosclerotic heart disease, pulmonary emphysema, cirrhosis of the liver, suicide, cancer of the rectum and colon who attended church once or more times per week than those who attended less frequently.

Levin and Markides (1986) employed data from a three-generation study of Mexican American Catholics to assess religious attendance and subjective health. Unlike other researchers however they partial out variables which are likely to be the explanation for an association between religious attendance and health. These variables include social support, physical capacity, social class, and subjective religiosity. The results show a zero-rated association between religious attendance and health.

Ferraro and Albrecht-Jensen (1991) examined the effect of religion on health status. The data for their study came from the 1984 and 1987 General Social Surveys conducted by the National Opinion Research Centre (NORC). In 1984 there were 1,473 participants and in 1987 there were 1,466. The questions asked related to religious practice, closeness to God, life after death, health status, income, education, trauma, and group membership. The results showed a positive correlation between religious practice and health status suggesting that higher levels of practice are related to better self-reported health status. There was however, a negative effect, between health and conservative religious affiliation, meaning that a more conservative religious affiliation is associated with poorer health.

Frankel and Hewitt (1994) investigated the link between religion and health in two distinct groups of University students from Western Ontario. The total sample of 299 was drawn from the 26,000 member student body. The first group of 172 consists of members of a number of Christian clubs or faith groups. The second group consists of 127 students enrolled on first and second year sociology courses.

Physical health was measured with a standard single item that asked respondents to report their health on a scale of 1 = poor to 5 = excellent. Use of health services was determined by a series of questions on the frequency of visits to physicians, dentists, walk in clinics, hospital emergency rooms, and other health professionals over the past six months. The results reveal that generally the affiliated students are significantly healthier and make less use of health care services. On the scale of perceived health, the affiliated students report an average of 4.06, compared with an average of 3.77 for the non-affiliated group ( $p < .01$ ). Consistent with their reports of better health, the affiliated students also report, for the past six months, significantly fewer visits to hospital emergency rooms ( $p < .05$ ), to walk in clinics ( $p < .05$ ), to physicians ( $p < .05$ ), and to the dentists ( $p < .05$ ). They also report spending significantly fewer days in hospital over the past year ( $p < .01$ ). In summary the results show a positive relationship between faith groups involvement and various aspects of health status.

Schmied and Jost (1994) administered a questionnaire on church attendance religiosity and past health to 67 men and 107 women who enrolled in graduate courses at the

University of Tennessee and Western State College of Colorado. The results showed that neither church attendance or scriptural literalism were significantly associated with seriousness of illness over the preceding 12 months.

King, Hueston, and Rudy (1994) explored the relationship between religious affiliation and obstetric outcome. A total of 1,919 records were reviewed and patients who expressed religious preferences were from various traditions. There were 31% of Baptists, 6% Pentecostal/Holiness, 5% Methodist, 4% Catholic; 9% other Protestant groups (Episcopal, Presbyterian, church of God, Church of Christ, Lutheran and others), 0.3% Jewish; and 3% other religions. Forty-one percent of patients had no religious preference.

Patients with a religious preference had fewer maternal and neonatal complications than patients without a religious preference. Odds ratios for patients with religious preferences compared to those without were .77 ( $p < .03$ ) for minor neonatal complications, .68 ( $p < .01$ ) for admissions to neonatal intensive care, and .76 ( $p < .03$ ) of maternal complications. In summary patients with a religious affiliation had a better obstetric outcome than those without.

Koenig (1995) examined the relationship between religion and a number of variables of older men in prison. Ninety-six inmates completed evaluation forms. The results show in relation to physical health that although a number of physical symptoms were unrelated to belief in God, frequency of prayer, religious coping or intrinsic religiosity, inmates

who attended church less than once per week were more likely than weekly attenders to complain about these symptoms. Depressive symptoms were also higher among prisoners with no current religious affiliation. Lowest depression scores were found among inmates currently with Pentecostal affiliation.

Rasannen, Kauhanen, Lakka, Kaplan, and Salonen (1996) investigated the association between selected religious groups and all-cause mortality in 1,627 eastern Finnish men aged 42-60 years during 1984-1989. The results showed that Orthodox men have considerable higher all-cause mortality than the Lutheran men eastern Finland.

Koenig and Larson (1998) examined the relationship between religious attendance (n=455), religious affiliation (n=542), and use of acute hospital services by medical patients age 60 or over. The results showed that those who attended Church weekly or more often were significantly less likely in the previous year to have been admitted to the hospital, had fewer hospital admissions, and spent fewer days in hospital than those attending less often (  $p < .0001$ ). Patients unaffiliated to a religious community, while not using more acute hospital services in the year before admission, had significantly longer hospital stays than those affiliated.

Najman, Williams, Keeping, Morrison and Anderson (1988) investigated the association between particular types of religious affiliation and the outcomes of the pregnancies of a sample of 6,566 women in Brisbane Australia. The women were split into three groups; members of religious sects, Christians who attend church frequently and Christians who

are infrequent attenders. The results show that the sect members appeared to have the most favourable health, lifestyles and healthy babies at delivery. On most measures the children of lukewarm Christians appear to manifest the worst health while Christian attenders form a separate group whose children's health is between the two groups.

Hummer, Rogers, Nam and Ellison (1999) investigated the relationship between religious involvement, as measured by attendance at church or religious services, and adult mortality in the United States. Data from the National Health Interview Survey – Multiple Cause of Death was used to find the association of religious attendance and sociodemographic, health and behavioural correlates with overall and cause-specific mortality.

Results show that religious attendance is associated with U.S. adult mortality in a graded fashion. Individuals who never attend church exhibit nearly twice the risk of death in the follow-up period compared to individuals who attend more than once a week. Also people who do not attend church or religious services are more likely to be unhealthy.

The third area investigates the relationship between religion and depression. Kennedy, Kelman, Thomas and Chen (1996) explored the relationship between religious preference and practice to depressive symptoms among 1,855 older adults who expressed a Jewish, Catholic, or other religious preference. The results show that Jewish religious preference was associated with a twofold elevation in the prevalence of depressive symptoms

compared to Catholics. Lack of attendance at religious services was associated with greater prevalence of depression among all groups, significantly so among Catholics.

Braam, Beekman, van Tilburg, Deeg and van Tilburg (1998) studied the relationship between religious involvement and depression in older Dutch citizens. Their study was part of the Longitudinal Ageing Study Amsterdam and consisted of 3,805 respondents. Religious involvement was assessed by two items: frequency of church attendance and strength of church affiliation. The results showed that religious involvement had a significant inverse linear association with the depression scale ( $p < .001$ ). Therefore, religious involvement was inversely associated with depression.

Braam, Beekman, Knipscheer, Deeg, van den Eeden and van Tilburg (1998) study the distribution of depressive symptoms in older Dutch citizens across religious denominations. The prevalence of depressive symptoms are lowest among the Reformed Calvinists, followed by Dutch Reformed and Roman Catholics. These differences are significant when compared with non-church members.

Strawbridge, Shema, Cohen, Roberts and Kaplan (1998) found Higher levels of organisational religiosity were associated with lower prevalence of depression ( $p < .01$ ) in this study organisational religion includes attendance at religious services and participation in other activities at a place of worship. They also found that non-organisational religiosity had no association with depression. Their sample consisted of 2,537 subjects.

Koenig, George and Peterson, (1998) investigated the effects of religious belief and activity on remission of depression in a sample of medically ill hospitalised older patients. The results showed that during the follow up 54% had remissions; the median time to remission was 30 weeks. Intrinsic religiosity was significantly and independently related to time to remission, but church attendance and private religious activities were not. Depressed patients with higher intrinsic religiosity scores had more rapid remissions than patients with lower scores.

The fourth area investigates the relationship between religion and mental health. Larson, Sherrill, Lyons, Craigie, Thielman, Greenwold and Larson (1992) assessed all measures of religious commitment reported in research studies published in the *American Journal of Psychiatry* and *Archives of General Psychiatry* in 1978 through 1989 (n = 35). For nearly two-thirds of the measures, the studies either made no hypotheses or reported no results concerning the relationship between religious commitment and mental health status. For the great majority of measures assessed, the studies reported a positive relationship between religious commitment and mental health.

Crawford, Handal and Wiener (1989) examined the relationship between religion and mental health among 226 people in the United States of America. The results indicated that high religious subjects were significantly less distressed and manifested better psychological adjustment than medium and low religious subjects.

The fifth area investigates the relationship between those in ministry and health. Fichter (1985) used data from 4,660 priests who responded to the National Clergy Health Survey to assess the state of health of retired priests as compared to that of non-retired priests in the same age category of 65 years old and older. When asked for a self-appraisal about their health, the retirees were more likely (42.4%) than the active (26.3%) to report their health is only 'fair or poor'. When asked whether their health interferes with their life and ministry they were also more likely (36.4% to 26.0%) to answer yes.

On the other hand, there are some measures on which the retirees seemed even healthier than the others. More of them report (35.6% to 24.7%) that they had no colds during the past year, and also (87.0% to 81.5%) that they had no severe headaches. Two thirds of both categories (67.4% to 67.5%) say that they had no sick days during the past year, although slightly more (17.7%) of the retired than of the non-retired (11.5%) had spent one or more nights in the hospital during the last twelve months.

### ***Hypothesis***

The link between religion and health is clear within the Christian scriptures. The scriptures show a very positive relationship between faith and health and healing. Psychological theory and empirical research is less clear, however as to the relationship between religion and health. Psychological theory suggests that religion has a negative effect as well as a positive affect (Tillich, 1981; James, 1902). Whilst empirical research reveals that religion is positively related to health (Levin & Vanderpool, 1987) and

negatively related (Schaefer, Drachman, Steinberg & Adlersberg, 1953). It is difficult to make a hypothesis as there is a large body of research which has not been reviewed. If however, the research reviewed and the Christian scriptures are taken together it would be expected that clergy who preach the healing miracles of Jesus should have a greater sense of health than those in the normal population.

### ***Scale Properties***

Table 8.13 reports on the reliability of the 20 item index of hypochondria and gives the item rest of scale correlations. The hypochondria scale achieved an alpha coefficient of .63 for the male clergy and .66 for the female clergy. Both alpha coefficients are below the .70 marker given by Kline (1993) as indicating a unidimensional and homogenous instrument.

### ***Interpreting the findings***

Table 8.14 presents the mean scale scores on the index of hypochondria for male and female clergy separately and compares the scores with the norms provided in the text manual. The data demonstrate that there is no significant difference between male clergy and men in the general population on the index of hypochondria or between female clergy and females in the normal population. There is a significant difference, however, between male clergy and female clergy, with female clergy scoring higher than male clergy on the scale of hypochondria. Females in the normal population also score significantly higher than males in the normal population.

Table 8.13 Hypochondriasis (hypochondria/sense of health) reliability analysis

	Item rest of scale Correlation	
	Male	Female
Have you ever been unable to cope with your life?	0.1974	0.1743
Do you make a point of visiting your doctor even if you think you only have a cold?	0.2042	0.3038
Do you worry a lot about catching disease?	0.2997	0.1677
Does stomach trouble run in your family?	0.2435	0.2644
Do you frequently feel faint?	0.2012	0.3265
Do severe aches and pains make it impossible for you to concentrate on your work?	0.1755	0.2408
Do you suffer a great deal from nervous exhaustion?	0.4234	0.4815
Are you often bothered by palpitations of the heart?	0.2516	0.3703
Do you sometimes feel a twitching of the face, head or shoulders?	0.2889	0.2456
Do you constantly suffer from constipation?	0.1577	0.2348
Do you worry a great deal about your health?	0.4222	0.3611
Are you often bothered by severe itching?	0.2671	0.1671
Are other people unsympathetic when you are feeling unwell?	0.1639	0.1867
Do you often have difficulty in breathing?	0.1565	0.3104
Are you considered a sickly person?	0.2586	0.2618
Do you often feel a choking lump in your throat?	0.1665	0.2349
Are you often troubled by noises in your ears?	0.1644	0.1758
Do you have hot or cold spells?	0.3283	0.3383
Do you have more headaches than most people?	0.2083	0.1894
Do you look at the colour of your tongue most mornings?	0.0916	0.1501
Alpha	0.6354	0.6596

These data demonstrate that both male and female clergy are neither more nor less hypochondriacal than the normal population. Female clergy do however, score higher on the scale of hypochondriasis than the male clergy.

Table 8.15 penetrates behind the overall mean scores recorded on the index of

hypochondria to examine the percentage of male and female clergy who endorse individual items. The results show that a fifth of male clergy find that they have been unable cope with life (22%) and sometimes feel a twitching of the face, head or shoulders (20%).

Table 8.14 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	3.88	3.81	3.70	4.51
Female	4.60	4.24	4.41	4.74

Male clergy/female clergy,	t = 3.456	p < .001
Male clergy/male norms,	t = 0.917	p < NS
Female clergy/female norms,	t = 0.725	p < NS
Male norms/female norms	t = 2.865	p < .01

Only one in a hundred male clergy makes a point of visiting their doctor when they think they have a cold (1%), frequently feel faint (1%), and consider themselves a sickly person (1%). Less than a tenth of male clergy suffer a great deal from nervous exhaustion (8%), have more headaches than most people (8%), worry a great deal about their health (6%) and worry a lot about catching disease (5%).

Among the female clergy over a third of female clergy have been unable to cope with life (36%). A fifth have hot and cold spells (20%) and sometimes feel a twitching of the face, head or shoulders (18%). Only one in a fifty of female clergy frequently feel faint (2%), and only one in a hundred consider themselves a sickly person (11%). Just over a tenth of

female clergy suffer a great deal from nervous exhaustion (1%) and have more headaches than most people (14%). Under a tenth of female clergy worry a great deal about their health (5%) and worry a lot about catching disease (3%).

Table 8.15 Percentage endorsement of the twenty items of the index of hypochondriasis (hypochondria/sense of health) for male and female clergy

	Male %	Female %
Have you ever been unable to cope with your life?	22	36
Do you make a point of visiting your doctor even if you think you only have a cold?	1	0
Do you worry a lot about catching disease?	5	3
Does stomach trouble run in your family?	11	10
Do you frequently feel faint?	1	2
Do severe aches and pains make it impossible for you to concentrate on your work?	13	18
Do you suffer a great deal from nervous exhaustion?	8	11
Are you often bothered by palpitations of the heart?	4	7
Do you sometimes feel a twitching of the face, head or shoulders?	20	18
Do you constantly suffer from constipation?	2	4
Do you worry a great deal about your health?	6	5
Are you often bothered by severe itching?	11	9
Are other people unsympathetic when you are feeling unwell?	12	11
Do you often have difficulty in breathing?	3	5
Are you considered a sickly person?	1	1
Do you often feel a choking lump in your throat?	7	8
Are you often troubled by noises in your ears?	6	7
Do you have hot or cold spells?	5	20
Do you have more headaches than most people?	8	14
Do you look at the colour of your tongue most mornings?	2	1

### ***Conclusion***

These data demonstrate that both males and female clergy are neither more nor less hypochondrical than the normal population. Female clergy are, however, more

hypochondrical than male clergy. These findings do not support the view of Christian health and wholeness.

## **Guilt (guilt/guilt freedom)**

### ***Definition***

The sixth construct proposed by the Eysenck Personality Profiler within higher order dimension of neuroticism is anchored by the opposite poles 'guilt' and 'guilt freedom'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'guilt' and offer the following definition:

high scorers are self-blaming, self-abasing and troubled by their conscience regardless of whether or not their behaviour is really morally reprehensible. Low scorers are little inclined to punish themselves or regret their past behaviour. A certain level of guilt may be appropriate for some people (indeed its complete absence is symptomatic of psychopathy) but excessive self-recrimination is usually regarded as a neurotic characteristic.

The construct 'guilt' has been of interest to psychologists since the time of Freud (1950a) and has given rise to various measures of guilt including, for example, McConahay and Hough's (1973) five item scale, Watson, Morris & Hood's (1988a, 1988b, 1988c, 1989a), three item scale defined as 'other-guilt' and a four item scale of 'self-guilt', the Test of Self-conscious Affect (Tangney, Wagner, Fletcher & Gramzow, 1992; Tangney, Wagner & Gramzow, 1992).

### ***Scripture and guilt***

In the Christian tradition there are two different ways of understanding the

relationship between guilt and scripture. The first understanding is one that suggests that the religious person is guilty. Right at the beginning of the bible, Adam and Eve feel guilty when faced by God's question, 'Adam, where are you?'

They heard the sound of the Lord God walking in the garden at the time of the evening breeze, and the man and his wife hid themselves from the presence of the Lord God among the trees of the garden. But the Lord God called to the man, and said to him, 'Where are you?' He said, 'I heard the sound of you in the garden, and I was afraid, because I was naked; and I hid myself.' He said, 'Who told you that you were naked? Have you eaten from the tree of which I commanded you not to eat?' The man said, 'The woman whom you gave to be with me, she gave me fruit from the tree, and I ate. Then the Lord God said to the woman, 'What is this that you have done?' The woman said, 'The serpent tricked me, and I ate.' The Lord God said to the serpent, 'Because you have done this, cursed are you among all animals and among all wild creatures; upon your belly you shall go, and dust you shall eat all the days of your life' (Genesis 3:8-14).

They reveal their guilt by hiding 'from the Lord among the trees of the garden'.

Psalm 51 pours out the anguish of the guilty soul:

Wash away all my guilt  
and cleanse me from my sin.  
For well I know my misdeeds,  
and my sins confront me all the day long.

The second understanding suggests that religious people should not be guilty, but forgiven and loved:

One of the criminals who were hanged there kept deriding him and saying, 'Are you not the Messiah? Save yourself and us!' But the other rebuked him, saying, 'Do you not fear God, since you are under the same sentence of condemnation? And we indeed have been condemned justly, for we are getting what we deserve for our deeds,

but this man has done nothing wrong.' Then he said, 'Jesus, remember me when you come into your kingdom.' He replied, 'Truly I tell you, today you will be with me in Paradise' (Luke 23: 39-43).

When he returned to Capernaum after some days, it was reported that he was at home. So many gathered around that there was no longer room for them, not even in front of the door; and he was speaking the word to them. Then some people came, bringing to him a paralysed man, carried by four of them. And when they could not bring him to Jesus because of the crowd, they removed the roof above him; and after having dug through it, they let down the mat on which the paralytic lay. When Jesus saw their faith, he said to the paralytic, 'Son, your sins are forgiven.' Now some of the scribes were sitting there, questioning in their hearts, 'Why does this fellow speak in this way? It is blasphemy! Who can forgive sins but God alone?' At once Jesus perceived in his spirit that they were discussing these questions among themselves; and he said to them, 'Why do you raise such questions in your hearts? Which is easier, to say to the paralytic, Your sins are forgiven, or to say, Stand up and take your mat and walk?' But so that you may know that the Son of Man has authority on earth to forgive sins he said to the paralytic 'I say to you, stand up, take your mat and go to your home.' And he stood up, and immediately took the mat and went out before all of them; so that they were all amazed and glorified God, saying, 'We have never seen anything like this!' (Mark 2: 1-12)

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypothesis of a positive as well as a negative correlation between scripture and guilt.

### ***Psychological theory***

Classic Freudian theory, as developed in *Totem and Taboo* (1950a), *The Future of an Illusion* (1950b) and *Moses and Monotheism* (1964) clearly linked guilt with the development of religion. Few contemporary investigators now support Freud's claim to an inherited collective mind containing the phylogenetic

memory of a monotraumatic primal murder. However, without recourse to this classic Freudian view, at least three independent strands of research within the psychology of religion lead to the hypothesis that clergy will experience higher levels of guilt than experienced by men and women in the population as a whole. The first strand of research is rooted in an attempt to explain the widely observed phenomenon that women tend to be more religious than men (Francis, 1997). This strand is represented, for example, by Argyle (1958) whose argument is based on linking two observations. Later psychoanalytic writers, like Pfister (1948) describe the function of religion in relieving guilt feelings. Other studies, like Lutwak and Ferrari (1996), Harvey, Gore, Frank and Batres (1997), Lutwak, Ferrari and Cheek (1998) suggest that women have more guilt feelings than men. Linking these two observations, Argyle (1958) argues that women are more religious than men *because* they have more guilt feelings than men. The argument is repeated by Argyle and Beit-Hallahmi (1975).

The second strand of research is rooted in an attempt to explain the attraction of the caring professions. This strand is represented, for example, by Coate (1989) who draws on the psychological mechanisms of repression, denial, reaction formation and projection to link intense infantile feelings of guilt with attraction to the caring professions. She argues that infantile experiences of guilt too painful to remember in our adult life are kept unconscious by repression or denial. To our defences against these painful feelings we may also need to add reaction formation in the sense of consciously practising their very opposite.

Coate continues:

So we will be always giving rather than depriving others or wanting for ourselves, always being nice rather than nasty, upset or angry, and always placating so as not to be confronted by guilt. This may succeed very well, and we come to imagine that we are this sort of person. If then we enter one of the 'caring' professions, and it may be attractive because it offers us great possibilities for reinforcing our 'nice' idea of ourselves, then the way of *projection* as a way of fending off our more painful feelings becomes very easily available to us.

The third strand of research is rooted in an attempt to analyse the psychological dynamics of the clerical profession and the peculiar stresses generated by that profession. This strand is represented, for example, by Irvine (1997) who identifies two key components of the profession. First, Irvine argues that the absence of clear parameters to the task of ministry leads to setting unattainable goals with the consequent sense of failure, frustration and guilt. Irvine continues:

Because there are no clear limits to the task, no adequate measures of accomplishment or success, and little specific accountability, the minister is often driven to measure up to undefined standards.... Add to this that much of the task of ministry is done in the seclusion of the church or office where no one is observing the work being done and there exists the formula for the minister to be driven by invisible demands prompted by guilt.

Second, Irvine argues that there is also 'a far deeper concept of guilt' rooted within the self-identity and perception of the minister. Emotions or feelings which are considered inappropriate or unacceptable against the standards assumed of the clergy associated with the ethics of the profession and consistent with the historic theology of the church can lead to the sense of failure, frustration and guilt. Irvine continues.

The presence of anger, hatred, jealousy, rivalries, desire or the sexual attraction of another person all have the potential to generate guilt and the related tension, as the personal system strives to return to its safety or

comfort zone. Here is some further support for the view that clergy may record higher levels of guilt than people in general.

### ***Empirical Evidence***

Empirical evidence, however, concerning the relationship between guilt and religiosity is scarce. On the one hand, an early empirical study by London, Schulman and Black (1964) concluded that there was no relationship between guilt and religious *affiliation*. This conclusion was based on a study conducted among 63 undergraduate psychology students and comparing the guilt scores recorded by Protestants, Catholics and Jews.

Another early empirical study conducted by Argyle and Delin (1965) concluded that there was a significant positive relationship between guilt and religious *practice* among females but not among males. This conclusion was based on several samples totalling around 700 children and correlating guilt scores with frequency of church attendance.

A more sophisticated conceptualisation of religiosity was adopted in more recent studies by Watson, Morris and Hood (1988c, 1989b) who drew on the distinction between intrinsic and extrinsic religiosity originally proposed by Allport and Ross (1967). These studies demonstrated that intrinsic religiosity tends to correlate positively with guilt measures, while no significant relationship exists between extrinsic religiosity and guilt measures. Employing a similar conceptualisation of religiosity in a study conducted among 268 students, Richards (1991) found that intrinsically religious subjects recorded significantly higher guilt scores than subjects classified as either extrinsically religious or non-traditionally religious. In a study conducted among 83 students, Meek, Albright and

McMinn (1995) also found that intrinsically religious participants were more prone to guilt, more likely to confess their wrongdoings, and more likely to forgive themselves than extrinsically religious subjects. Luyten, Corveleyn and Fontaine (1998) found in a sample of undergraduate Catholic students that religious subjects were more prone to constructive forms of guilt as measured by the Test of Self-conscious Affect (Tangney, Wagner & Gramzow, 1989). Religious subjects also report in general more feelings of guilt as measured by the frequency measure of guilt.

Some evidence for the view that clergy record higher levels of guilt is provided by the following studies. In an early dissertation, Dodson (1957) matched fifty Protestant theology students with fifty graduate students in other fields on age, sex, marital status, intelligence, religious background, and father's occupational level. According to scores on two projective tests (a word association test and a sentence completion test) the theology students demonstrated more guilt over sexual and hostile feelings in comparison with the control group.

Rickner and Tan (1994) compared the mean scores of guilt as recorded by 168 Protestant clergy, 43 male teachers from public high schools and 51 male teachers from Christian high schools. This study found that both the Christian teachers and the Protestant clergy recorded higher levels of guilt than the public high school teachers. There was no significant difference in the levels of guilt recorded by the Protestant clergy and the Christian teachers.

Hood (1992) makes the point that a major difficulty in subjecting theories relating religion and guilt to empirical evaluation resides in identifying 'reliable quantitative measures of guilt'. Moreover, reviews of scales designed to assess guilt make it clear that different instruments have been developed to measure different understandings of guilt or to be applied in different situations (Harder & Lewis, 1987; Harder & Zalma, 1990).

A guilt-related measure already well established within the psychology of religion is the five-item scale developed by McConahay and Hough (1973) to assess what they describe as the 'guilt-oriented dimension of Christian belief'. McConahay and Hough's instrument has been reapplied in the psychology of religion by Watson, Hood, Morris and Hall (1985), Watson, Morris and Hood (1987, 1989b) and Kaiser (1991). This instrument is unsuitable for testing the relationship between religiosity and guilt as proposed by the present study for two reasons. First, since the scale items are already so clearly couched in religious terms the instrument presupposes a relationship between the two constructs of guilt and religion. Second, the short scale confuses two types of items. Two of the items express personal evaluation of guilt, for example 'Whatever God's punishment for me, I have no doubt that I deserve it.' Three of the items express creedal statements, for example, 'The fires of hell are the right place for murders, drunkards, and other persons who violate God's laws.' Watson, Morris and Hood (1988a, 1988b, 1988c, 1989a) develop this instrument to produce two shorter scales, a three-item scale defined as 'other-guilt' and a four-item scale of 'self-guilt'. The revised instrument remains, however, more appropriate for distinguishing between different Christian groups than between religious and irreligious groups.

Four examples of more broadly based indices of guilt illustrate the wider psychometric problems in assessing this construct and differentiating guilt from other clearly related constructs. First, Tangney and his associates developed the Test of Self-Conscious Affect which consists of 15 brief scenarios that yield separate proneness to guilt and proneness to shame indices. Test-retest reliabilities are reported as 0.85 for shame and 0.74 for guilt (Tangney, Wagner, Fletcher and Gramzow, 1992; Tangney, Wagner and Gramzow, 1992). This instrument has also been used by Lutwak and Ferrari (1996) and Lutwak, Ferrari and Cheek (1998).

Second, Johnson and his associates developed the Dimensions of Conscience Questionnaire. In its various forms this instrument contains 27 or 30 abbreviated scenarios that depict either a violation of reciprocity or a shortfall on a status linked role. Each scenario is rated on the degree of good or bad feelings it evokes. Bad feelings associated with violation of role reciprocity are interpreted as guilt, and bad feelings associated with a shortfall on a status linked role are interpreted as shame (Johnson, Danko, Huang, Park, Johnson and Nagoshi, 1987; Johnson, Kim and Danko, 1989). This instrument has also been used by Gore and Harvey (1995), Harvey, Gore, Frank and Batres (1997), and Harvey, Frank, Gore and Batres (1998).

Third, Klass (1987) developed a self-report measure of guilt based on a situational approach. This instrument measures the degree of anticipated guilt feelings for a wide range of naturally occurring stimulus situations. Subjects are presented with 22 separate

situations and asked to imagine themselves in that particular situation. They then indicate the intensity of their emotional reaction on four dimensions (regret, self-disappointment, guilt, shame) using a five point Likert scale. The measure yields a total guilt score and several subscale scores including Interpersonal Harm Guilt, Norm Violation Guilt, and Self-Control Failure Guilt. Klass (1987) reported an alpha reliability of 0.92 and test-retest reliability of 0.90 for the Total Guilt Scale. This instrument has also been used by Rickner and Tan (1994).

Fourth, Caprara, Marizi and Perugini (1992) developed a measure of guilt which produces two scores defined as need for reparation and fear of punishment. The need for reparation scale contains items like 'Thinking back on promises I've broken makes me really uncomfortable' and 'When faced with my mistakes, I want to make up for them as soon as possible'. The fear of punishment scale contains items like 'I've reacted in ways that are hard to forgive' and 'I'm sometimes weighed down by feelings of guilt.'

### ***Hypothesis***

There is a clear link between religion and guilt. Psychological theory states that guilt is clearly linked with the development of religion (Freud, 1950a) and the main body of empirical research links religion and guilt (Dodson, 1957). The Christian scriptures, however, suggest that religious people are guilty and that love and forgiveness should override feelings of guilt. Taking into consideration the empirical evidence and research among clergy it is hypothesised that clergy should be more guilty than people in the general population.

## Scale Properties

Table 8.16 reports on the reliability of the 20 item index of guilt and gives the item rest of scale correlations. The guilt scale achieved an alpha coefficient of .76 for the men and .74 for the women. Both alpha coefficients are above the .70 marker recommended by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument

Table 8.16 Guilt (guilt/guiltfreedom) reliability analysis

	Item rest of scale correlation	
	Male	Female
Are you harbouring a guilty secret that you are afraid must come out one day?	0.3235	0.2520
Do you often feel a strong need to confess something that you have done?	0.4029	0.3475
Do you sometimes think you have let down your parents by the life you have led?	0.2612	0.2308
Do you have some bad habits that are really inexcusable?	0.2593	0.2144
Do you regret your wilder experiences when you were a teenager?	0.2299	0.1825
Do you regard your youth as miss-spent?	0.2383	0.2311
Do you believe that you have committed unpardonable sins?	0.2517	0.2440
Do you often feel as though you have done something wrong and wicked even though this feeling is not really justified?	0.4924	0.4212
Do you often think back on how badly you have treated people in the past?	0.5033	0.4785
Do you think you must have disappointed your teachers at school by not working hard enough?	0.2312	0.1315
Do you often feel that people disapprove of you?	0.3688	0.3234
Are you often bothered by your conscience?	0.4901	0.5237
Do you believe that the pleasure you have now will have to be paid for eventually?	0.2445	0.2280
Do you often catch yourself apologising when you are not really at fault?	0.3190	0.3580
Are you often troubled by feelings of guilt?	0.5835	0.5408
Do you expect to be punished for your sins?	0.1628	0.1492
Do your own desires and fantasies sometimes disgust you?	0.3357	0.3468
Do you spend a great deal of time going over things that have happened in the past and wishing that you had behaved more responsibly?	0.4918	0.4852
Do you often pray for forgiveness?	0.0988	0.1663
If you have an accident do you assume that you must have deserved it because of something you had done?	0.2270	0.2694
Alpha	0.7639	0.7407

### ***Interpreting the findings***

Table 8.17 presents the mean scale scores on the index of guilt for male and female clergy separately and compares these scores with the norms provided in the test manual. The data demonstrate that male clergy recorded significantly higher scores on the index of guilt in comparison with the scores recorded by men in general. On the other hand, female clergy recorded scores on the index of guilt which were not significantly different from the scores recorded by women in general. Moreover, in the population as a whole women record higher scores than men on the index of guilt, while male clergy record higher scores than female clergy on the index of guilt. These data reveal that it is the male clergy who are significantly more guilty than the population norms and more guilty than the female clergy.

Table 8.18 penetrates behind the overall mean scores recorded on the index of guilt to examine the percentages of male and female clergy who endorse the individual items. These data demonstrate that a third or more of male clergy find that their own desires and fantasies sometimes disgust them (37%), often catch themselves apologising when they were not really at fault (45%), are often bothered by their conscience (34%) and just under a third consider that they have some bad habits that are really inexcusable (31%). Between a fifth and a third of male clergy think that they must have disappointed their teachers at school by not working hard enough (27%), often think back on how badly they have treated people in the past (23%), and spend a great deal of time going over things that have happened in the past and wishing that they had behaved more responsibly (20%).

Table 8.17 Mean scale scores (for men and women compared with population norms)

gender	clergy		norms	
	mean	sd	mean	sd
Male	10.49	6.32	7.79	6.84
Female	9.21	5.75	8.65	7.05

Male clergy/female clergy,	t = 3.947	p < .001
Male clergy/male norms,	t = 8.622	p < .001
Female clergy/female norms,	t = 1.484	p < NS
Male norms/female norms,	t = 2.311	p < .05

On the other hand, three-quarters of male clergy don't often feel a strong need to confess something they have done (75%) and less than one in ten of the male clergy regret wilder experiences when they were a teenager (9%), regard their youth as mis-spent (7%) and believe that they have committed unpardonable sins (3%).

These data also demonstrate that a third or more of female clergy often catch themselves apologising when they were not really at fault (54%) and are often bothered by their conscience (33%). Between a fifth and a third of female clergy often feel a strong need to confess something that they have done (29%), are often troubled by feelings of guilt (22%), think that they must have disappointed their teachers at school by not working hard enough (21%), and consider that they have some bad habits that are really inexcusable (22%).

On the other hand, around three-quarters of female clergy don't often feel a strong need to confess something they have done (71%) and less than one in ten of the female clergy

regret wilder experiences when they were a teenager (7%), regard their youth as mis-spent (4%) and believe that they have committed unpardonable sins (1%).

Table 8.18 Percentage endorsement of the twenty items of the index of guilt (guilt/guilt freedom) for male and female clergy

	Male %	Female %
Are you harbouring a guilty secret that you are afraid must come out one day?	18	13
Do you often feel a strong need to confess something that you have done?	25	29
Do you sometimes think you have let down your parents by the life you have led?	10	7
Do you have some bad habits that are really inexcusable?	31	22
Do you regret your wilder experiences when you were a teenager?	9	7
Do you regard your youth as mis-spent?	7	4
Do you believe that you have committed unpardonable sins?	3	1
Do you often feel as though you have done something wrong and wicked even though this feeling is not really justified?	10	8
Do you often think back on how badly you have treated people in the past?	23	17
Do you think you must have disappointed your teachers at school by not working hard enough?	27	21
Do you often feel that people disapprove of you?	15	16
Are you often bothered by your conscience?	34	33
Do you believe that the pleasure you have now will have to be paid for eventually?	5	1
Do you often catch yourself apologising when you are not really at fault?	45	54
Are you often troubled by feelings of guilt?	19	22
Do you expect to be punished for your sins?	15	13
Do your own desires and fantasies sometimes disgust you?	37	19
Do you spend a great deal of time going over things that have happened in the past and wishing that you had behaved more responsibly?	20	16
Do you often pray for forgiveness?	80	76
If you have an accident do you assume that you must have deserved it because of something you had done?	2	3

It may not be surprising to find that 80% of male clergy and 76% of female clergy often pray for forgiveness. Indeed given the emphasis of the Christian tradition on prayer for

forgiveness, for example in the Lord's Prayer, it may be surprising to find that 24% of female clergy and 20% of male clergy do not consider that they often pray for forgiveness.

### ***Conclusion***

The data demonstrate that male clergy score significantly higher on the scale of guilt than the men in the normal population, this finding is consistent with the findings of other research into the clergy and guilt (Dodson, 1957, Rickner & Tan, 1994). The finding that male clergy score significantly higher than female clergy is consistent with the body of research which reports male clergy as having a more feminine personality profile (Francis, 1991; Jones & Francis, 1992; Musson, 1998; Loudon & Francis, 1999).

On the other hand, studies like Francis (1992), Robbins, Francis and Rutledge (1997) and Francis and Musson (1999) have drawn attention to the way in which female Anglican clergy demonstrate either the same personality profile as male Anglican clergy or a more masculine profile than male Anglican clergy.

## **Obsessiveness (obsessive/casual)**

### ***Definition***

The seventh construct proposed by the Eysenck Personality Profiler within the higher order dimension of neuroticism is anchored by the opposite poles 'obsessive' and 'casual'. In their original formulation Eysenck and Wilson (1976) describe this construct as obsessiveness and offer the following definition:

high scorers on the obsessiveness sub-factor are careful, conscientious, highly disciplined, staid, finicky, and easily irritated by things that are unclean, untidy or out of place. Low scorers are casual and easy-going, with less need for order, routine or ritual. Again, the questions are selected to cover a normal range, so the scale cannot really be used to diagnose an obsessive-compulsive neurosis.

The construct 'obsessiveness' has been of interest to psychologists since the time of Freud (1953, 1957, 1959) and has given rise to many different scales to measure obsession, including, for example, Ai3 (Kline, 1971), the Sandler-Hazari Obsessionality Inventory Trait Scale (Sandler & Hazari, 1960), the Basic Character Inventory (Torgersen, 1980) and the content scored Rorschach (Masling, Rabie & Blondheim, 1967).

### ***Scripture and obsessiveness***

In the Christian tradition there are two different ways of understanding the relationship between obsessiveness and scripture. The first relationship proposed between obsessiveness and religion by the Christian scriptures is one which suggests that religious people who put their faith in God should abide by the rules and regulations contained within the Bible. The Jews in the Old Testament are a people who are asked to obsessively abide by the rules in the Old Testament. The book of Leviticus sets out the rules and regulations that the Jewish people are to abide by religiously, for example, there are strict rules about clean and unclean foods and about the appointed festivals they are to be kept:

The Lord spoke to Moses and Aaron saying to them: speak to the people of Israel saying: From among all the land animals, these are the creatures that you may eat. Any animal that has divided hoofs and is cleft-footed and chews the cud, such you may eat. But among those who chew the cud

or have divided hoofs, you shall not eat the following: the camel, for though it chews the cud, it does not have divided hoofs; it is unclean for you (Leviticus 11: 1-4).

The Lord spoke to Moses and Aaron saying to them: speak to the people of Israel and say to them: these are the appointed festivals of the Lord that you shall proclaim as holy convocations, my appointed festivals. Six days shall my work be done; but the seventh day is a Sabbath of complete rest, a holy convocation; you shall do no work: it is a Sabbath to the Lord throughout your settlements. These are the appointed festivals of the Lord, the holy convocations, which you shall celebrate at the time appointed for them. In the first month, on the fourteenth day of the month, at twilight, there shall be a Passover offering to the Lord, and on the fifteenth day of the same month is the festival of unleavened bread to the Lord; seven days you shall eat unleavened bread. On the first day you shall have a holy convocation; you shall not work at your occupations. For seven days you shall present the Lord's offerings by fire; on the seventh day there shall be a holy convocation: you shall not work at your occupations (Leviticus 23: 1-8).

The second understanding suggests a more relaxed approach to the rules about unclean foods and the Sabbath regulations:

About noon the next day, as they were on their journey and approaching the city, Peter went up on the roof to pray. He became hungry and wanted something to eat; and while it was being prepared, he fell into a trance. He saw the heaven opened and something like a large sheet coming down, being lowered to the ground by its four corners. In it were all kinds of four-footed creatures and reptiles and birds of the air. Then he heard a voice saying, 'Get up, Peter; kill and eat.' But Peter said, 'By no means, Lord; for I have never eaten anything that is profane or unclean.' The voice said to him again, a second time, 'What God has made clean, you must not call profane.' This happened three times, and the thing was suddenly taken up to heaven (Acts 10: 9-16).

One Sabbath he was going through the grain fields; and as they made their way his disciples began to pluck heads of grain. The Pharisees said to him, 'Look, why are they doing what is not lawful on the Sabbath?' And he said to them, 'Have you never read what David did when he and his companions were hungry and in need of food? He entered the house of God, when Abiathar was high priest, and ate the bread of the Presence, which it is not lawful for any but the priests to eat, and he gave some to his companions.' Then he said to them, 'The Sabbath was made for

humankind, and not humankind for the Sabbath; so the Son of Man is lord even of the Sabbath' (Mark 2: 23-28).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and obsessiveness.

### ***Psychological theory***

The relationship between obsessive actions and religious practices derives from Freud (1953, 1957, 1959). In 1907 Freud, published a paper on 'Obsessive Acts and Religious Practices' (Freud, 1959) in which he traced the resemblance between obsessive acts in neurotics and those religious observances by means of which the faithful give expression to their piety. He was convinced that the insight which he had gained into the origin and meaning of neurotic obsessions and 'ceremonial' would enable him to draw inferences about the psychological process governing religious practices. Freud was struck by a number of resemblances between obsessional neurosis and religion. He first mentioned three, the first, was the fear of pangs of conscience following any omission of the neurotic's ceremonial, or the religious persons rite. The second was the complete isolation of both neurotic ceremonial and religious rites from all other activities and the third was the conscientiousness with which the details are carried out. Later he give five more, guilt, renunciation of instincts, the element of compromise, acts of penance in religious practice and their counterparts in the obsessional neurosis and the mechanism of physical displacement (Philp, 1956).

In recent years, a growing number of studies have explored the empirical relationship between religiosity and obsessionality. Although these have used different measures of both religiosity and obsessionality there begins to emerge a coherent picture that demonstrates more positive religious attitude and greater frequency of religious practice are associated with higher scores on measures of obsessional personality traits confirming Freud's theory.

Neither religiosity nor obsessionality are simple or unidimensional constructs. For example, Fontana (1980) has argued there are two forms of obsessionality. First, the obsessional personality, is characterised by obsessional traits such as orderliness, rigidity, and overemphasis upon hygiene and self control. Second, the obsessional neurotic, is characterised by obsessional symptoms such as compulsive thoughts and impulses, indecision, guilt and ritualistic behaviour. Accordingly, researchers have employed measures of both obsessional personality traits, and measures of obsessional symptoms. These different measures of obsessionality have been used alongside several different measures of religiosity, including the Francis Scale of Attitude Toward Christianity (Francis and Stubbs, 1987), the Doctrinal Orthodoxy Scale (Batson and Ventis, 1982), the Quest Scale (Batson and Ventis, 1982), the Religious Orientation Scale (Allport and Ross, 1967), as well as questions concerned with belief in God, belief in afterlife, church attendance, personal prayer and personal bible reading. The findings from these studies can be best summarised by distinguishing between perspectives concerned with religious attitudes and perspectives concerned with religious practice.

### *Empirical evidence*

First, most research has examined the association between measures of religious attitude and obsessionality. Data have been largely consistent in showing that a more positive religious attitude is associated with higher scores on measures of obsessional personality traits. Lewis and Maltby (1992) found a significant association between the Francis Scale of Attitude Toward Christianity and the Ai3 (males  $p < .01$ ; females,  $p < .01$ ) among United Kingdom university students. This finding was replicated by Lewis and Joseph (1994a) in Northern Irish university students ( $p < .05$ ). Further, Lewis (1994) found a significant association between the Francis Scale of Attitude Toward Christianity and the Sandler-Hazari Obsessional Trait Scale (males,  $p < .01$ ; females,  $p < .01$ ) among United Kingdom university students. This finding was replicated by Lewis and Maltby (1994) in United Kingdom adults (males,  $p < .05$ ; females,  $p < .05$ ) and by Lewis and Maltby (1995) among English female college students and English adults (sample 1,  $p < .01$ ; sample 2,  $p < .01$ ). Further, Juni and Fischer (1985) found a significant association between belief in God and the Ai3 (males,  $p < .05$ ; females,  $p < .001$ ) and belief in afterlife and the Ai3 (females,  $p < .05$ ) among United States of America university students.

However, two studies have failed to report significant associations between measures of religious attitude and obsessional personality traits. Juni and Fischer (1985) found no significant association between belief in afterlife and the Ai3 in their male sample. Similarly Kaldestad (1992, 1993, 1995) found no significant association between the obsessional scale of the Basic Character Inventory and the Quest Scale, the Doctrinal Orthodoxy Scale, the Intrinsic Scale, and the Extrinsic Scale among a sample of

Norwegian adults. Research findings are also consistent in showing no significant association between religious attitude and obsessional symptoms. Lewis (1994) found no significant association between the Francis Scale of Attitude Toward Christianity and the Sandler-Hazari Obsessional Symptom Scale among United Kingdom university students. This finding was replicated by Maltby, McCollam and Millar (1994) among United Kingdom adults, and by Lewis and Maltby (1995) among English college students and English adults.

Lewis (1996) explored the issue of religiosity and obsessionalism among a sample of 83 Northern Irish adults. All subjects completed the short adult form of the Francis Scale of Attitude Toward Christianity (Francis, 1993) and three short measures of obsessional personality traits were administered: two 5 item scales developed by Farber (1955) and Rabinowitz (1957), and an 8 item scale developed by Centers (1969). Each item is scored on a dichotomous scale: *yes* and *no*. Scores range from 0 to 5 or 0 to 8 respectively, with higher scores on the scales indicating more obsessional personality traits. The results showed that among a sample of Northern Irish adults, higher scores on Francis Scale of Attitude Toward Christianity were associated with higher scores on each of the three measures of obsessional personality traits in the male sample, and two of the obsessional measures in the female sample. On the basis of these and other findings it would seem that a positive religious attitude is associated with greater obsessional personality traits.

Second, several recent studies have examined the association between religious practice and obsessionalism. Data have been largely consistent in showing that more frequent

religious practices, including regularity of church attendance, personal prayer; and personal bible reading are associated with higher scores on measures of obsessional personality traits. Juni and Fischer (1985) found a significant association between church attendance and the Ai3 (males,  $p < .01$ ; females,  $p < .01$ ), and between church attendance and a Rorschach anal measure (males,  $p < .05$ ) among United States of America university students. These findings were in part replicated and extended by Lewis and Joseph (1994b) who found a significant association between church attendance and the Ai3 (males  $p < .001$ ; females,  $p < .05$ ), and between church attendance and the Sandler-Hazari Obsessional Personality Trait Scale (males,  $p < .05$ ) among Northern Irish university students. In turn, these findings were extended by Lewis and Maltby (1995) who report a significant association between the Sandler-Hazari Obsessional Personality Trait Scale and measures of religious practice (females, church attendance,  $p < 0.01$ , personal prayer  $p < .01$ , and personal bible reading,  $p < .01$ ) among Northern Irish adults.

However, three studies have failed to report significant associations between measures of religious practice and obsessional personality. Juni and Fischer (1985) found no significant association between church attendance and a Rorschach anal measure in their female sample. Lewis and Joseph (1994b) found no significant association between church attendance and the Sandler-Hazari Obsessional Personality Trait measure in their female sample. Lewis and Maltby (1995) found no significant association between the Sandler-Hazari Obsessional Personality Trait Scale and measures of religious practice in their male sample.

Due to limited data the association between religious practice and obsessional symptoms is unclear. Lewis and Joseph (1994b) found a significant association between church attendance and the Sandler-Hazari Obsessional Symptom Scale in their male sample ( $p < .05$ ), but not in their female sample. Lewis and Maltby (1995) report a significant association between the Sandler-Hazari Obsessional Symptom Scale and personal prayer in their male sample ( $p < .05$ ). Further they report no significant associations were found between the Sandler-Hazari Obsessional Symptom Scale and church attendance and personal bible reading. Similarly, in their female sample, no significant associations were found between the Sandler-Hazari Obsessional Symptom Scale and church attendance, personal prayer, and personal bible reading.

Maltby, Talley, Cooper and Leslie (1995) administered a questionnaire which included the Sandler-Hazari Obsessionality Inventory (Sandler & Hazari, 1960) and the 'Age Universal' I-E scale (Gorsuch & Venable, 1983) amongst other inventories to 324 Southern Baptist adults from the USA. The results showed that the measure of obsessional symptoms loaded on the same component as an extrinsic orientation towards religion. In summary it can be said that obsessionality underpins a public orientation towards religion.

Maltby (1995a) administered the Sandler-Hazari Obsessional Inventory symptom measure (Sandler & Hazari, 1960) to two samples. The first consisted of 172 English adults the second consisted of 164 US adults. The two samples were also asked to indicate using a 5-point scale how often they attended a place of worship. The results

showed no significant correlation between frequency of church attendance and obsessional symptoms for men or women in the English sample. There was, however, a significant relationship in the US sample but a negative one for both men and women. This finding contradicts that predicted by Lewis and Joseph (1994).

Hutchinson, Patock-Peckham, Cheong and Nagoshi (1998) administered the Religious Orientation Scale (Allport & Ross, 1967), the Hassles and Uplifts Scale (Zautra, Guarnaccia & Dohrenwend, 1986), measures of impulsiveness & Venturesomeness (Eysenck, Eysenck & Barrett, 1985), the neuroticism short form of the Revised Eysenck, Personality Questionnaire- Revised (Eysenck, Eysenck & Barrett, 1985), the Padua Obsessive Inventory (Sanavio, 1988), the Zung Depression Scale (Zung, 1965) to a total of 249 college students, 101 males and 148 females. The results reveal that intrinsic religiosity was found to be predictive of proneness to obsessive-compulsive cognitions/ behaviours among Catholics.

Maltby (1999) explored the relationship between frequency of church attendance and obsessional symptoms, with particular reference to those individuals who show the highest level of public ritual (church attendance) and those individuals who do not. The sample consisted of 574 adults, 269 lived in England, 145 lived in the USA and 160 lived in Northern Ireland. Respondents were administered the obsessional symptom measure from the Sandler-Hazari Obsessionality Inventory (Sandler & Hazari, 1960). They were also asked to indicate how often they attended their place of worship, available responses ranged from never, very rarely, once a month, fortnightly and once a week or more. The

results reveal that the group who attended church once a week or more scored significantly higher on the measure of obsessional symptoms ( $p < .01$ ) than the group comprising the rest of the sample.

### ***Hypothesis***

The link between religion and obsessiveness is mixed. The Christian scriptures present the view that the Christian may be obsessive or may be relaxed. Psychological theory suggests that there is a relationship between obsessive actions and religious practices (Freud, 1953). The empirical evidence has shown that religious people tend to be more obsessive (Lewis & Maltby, 1992) and the empirical evidence has shown no association between obsessional personality traits and religious attitude (Juni & Fischer, 1985). The balance of empirical research, however, suggests that religious people are more obsessive. As a consequence it is hypothesised that ministers of religion who prepare and lead religious services would be more obsessive than people in the normal population.

### ***Scale Properties***

Table 8.19 reports the reliability of the 20 item index of obsessiveness and gives the item rest of scale correlations. The obsessive scale achieved an alpha coefficient of .73 for men and .59 for women. The alpha coefficient for the male clergy is above the .70 marker given by Kline (1993) indicating a unidimensional and homogeneous psychometric instrument. The female clergy alpha coefficient however is below the .70 marker.

Table 8.19 Obsessiveness (obsessive/casual) reliability analysis

	Item rest of scale correlation	
	Male	Female
Is it very important to you that everything should always be neat and tidy?	0.4789	0.3414
Are you always careful to pay back even the most trivial debt?	0.2195	0.1397
Do you feel very uncomfortable if your home gets untidy?	0.4595	0.3448
Do you routinely check that all the lights, appliances and taps are off before you go to bed?	0.3066	0.2394
If you are staying somewhere away from home, would you work out how to escape in the event of a fire?	0.2002	0.1913
Do you worry a great deal about catching illnesses from people in public?	0.1691	0.1423
Are you obsessive about locking up drawers, windows, suitcases and things?	0.4497	0.2950
Are you careful to keep a supply of tinned or dried food in your house in case of an emergency food shortage?	0.2915	0.2679
Does dirt frighten and disgust you to an exceptional degree?	0.2712	0.1244
Do you spend a great deal of time filing and arranging your papers so you will be certain to know where everything is if you should want it?	0.4352	0.3337
Are you easily irritated by things that are out of place?	0.4796	0.3137
Are you often acutely aware of the ticking of clocks?	0.2027	0.1920
Do you go through a set routine on going to bed that if broken would cause you great difficulty in getting to sleep?	0.2857	0.1810
Do you collect all kinds of scrap materials in case they might come in handy one day?	0.1247	0.0311
Do you keep very careful accounts of all the money you spend?	0.3150	0.2555
Are you often tempted to correct people's grammar when you are talking to them (although politeness may prevent you from doing so)?	0.1908	0.0401
Are you sometimes bothered by an unimportant thought that run through your mind for days?	0.2177	0.1341
Do you usually adjust your hair and clothing before you open the door?	0.2651	0.1993
Are you very upset if your daily habits are disturbed by unforeseen events?	0.3619	0.2041
Are you sometimes compelled to wash your hands even though you know that they are perfectly clean?	0.2607	0.1073
Alpha	0.7286	0.5884

***Interpreting the findings***

Table 8.20 presents the mean scale scores on the index of obsessiveness for male and female clergy separately and compares these scores with the norms provided in the test manual. The data demonstrate that the men in the normal population scored significantly higher on the scale of obsessiveness than male clergy and that the females in the normal population scored significantly higher on the scale of obsessiveness than the female clergy. Male clergy score significantly higher on the scale of obsessiveness than female clergy. The females in the normal population scored significantly higher on the scale of obsessive/casual than the males in the normal population.

In summary these data reveal that men and women in the normal population are more obsessive than male and female clergy and that female clergy are more obsessive than male clergy.

Table 8. 20 Mean scale scores (for men and women compared with population norms)

Sex	clergy		norms	
	mean	sd	mean	sd
Male	11.31	6.34	12.04	6.57
Female	10.43	5.15	12.90	6.41

  

Male clergy/female clergy,	t = 2.783	p < .01
Male clergy/male norms,	t = 2.365	p < .01
Female clergy/female norms,	t = 7.233	p < .001
Male norms/female norms	t = 2.474	p < .01

Table 8.21 penetrates behind the overall mean scores recorded on the index of obsessiveness to examine the male and female clergy who endorse the individual items.

These data demonstrate that two-fifths or more of male clergy think it is very important that everything should always be neat and tidy (41%), feel very uncomfortable if their homes get untidy (51%), routinely check that all the lights, appliances and taps are off before they go to bed (43%), are often tempted to correct people's grammar when talking to them (41%). Between a fifth and a third when staying somewhere away from home, would work out how to escape in the event of a fire (25%), spend a great deal of time filing and arranging their papers so they will be certain to know where everything is if they should want it (27%), are easily irritated by things that are out of place (32%), collect all kinds of scrap material in case they might come in handy one day (27%) and are sometimes bothered by unimportant thoughts that run through their mind for days (31%).

On the other hand, nearly all of the male clergy in the sample don't worry a great deal about catching illness from people in public (99%), are not frightened or disgusted by dirt (98%) and only one in ten of the male clergy are obsessional about locking up drawers, windows, suitcases and things (10%). Less than one in ten of the male clergy go through a set routine on going to bed that if broken would cause a great deal of difficulty in getting to sleep (6%).

These data also demonstrate that two-fifths or more of female clergy feel very uncomfortable if their homes get untidy (47%) and are often tempted to correct people's grammar when talking to them (41%). Between a fifth and a third when staying somewhere away from home, would work out how to escape in the event of a fire (26%),

think it is very important that everything should always be neat and tidy (35%) are easily irritated by things that are out of place (23%), collect all kinds of scrap material in case they might come in handy one day (34%) and are sometimes bothered by unimportant thoughts that run through their mind for days (30%).

Table 8.21 Percentage endorsement of the twenty items of the index of obsessiveness (obsessive/casual) for male and female clergy

	Male %	Female %
Is it very important to you that everything should always be neat and tidy?	41	35
Are you always careful to pay back even the most trivial debt?	64	73
Do you feel very uncomfortable if your home gets untidy?	51	47
Do you routinely check that all the lights, appliances and taps are off before you go to bed?	43	34
If you are staying somewhere away from home, would you work out how to escape in the event of a fire?	25	26
Do you worry a great deal about catching illnesses from people in public?	1	0
Are you obsessional about locking up drawers, windows, suitcases and things?	10	4
Are you careful to keep a supply of tinned or dried food in your house in case of an emergency food shortage?	9	25
Does dirt frighten and disgust you to an exceptional degree?	2	2
Do you spend a great deal of time filing and arranging your papers so you will be certain to know where everything is if you should want it?	27	14
Are you easily irritated by things that are out of place?	32	23
Are you often acutely aware of the ticking of clocks?	17	19
Do you go through a set routine on going to bed that if broken would cause you great difficulty in getting to sleep?	6	4
Do you collect all kinds of scrap materials in case they might come in handy one day?	27	34
Do you keep very careful accounts of all the money you spend?	32	23
Are you often tempted to correct people's grammar when you are talking to them (although politeness may prevent you from doing so)?	41	41
Are you sometimes bothered by an unimportant thought that runs through your mind for days?	31	30
Do you usually adjust your hair and clothing before you open the door to a visitor?	20	22
Are you very upset if your daily habits are disturbed by unforeseen events?	13	8
Are you sometimes compelled to wash your hands even though you know that they are perfectly clean?	8	4

On the other hand, all of the female clergy in the sample don't worry a great deal about catching illness from people in public (100%), and are not frightened or disgusted by dirt (98%). Less than one in ten of female clergy are obsessional about locking up drawers, windows, suitcases and things (4%) and go through a set routine on going to bed that if broken would cause a great deal of difficulty in getting to sleep (4%).

### ***Conclusion***

These data demonstrate that male and female clergy are less obsessional than the normal population. The findings are not consistent with Freud's theory (Freud, 1953; 1957; 1959). Nor is it consistent with the large body of research which shows religious people to be more obsessional (for example, Juni & Fuscher, 1985; Lewis & Maltby, 1994b; Maltby, Tally, Cooper & Leslie, 1995; Lewis, 1996; Maltby, 1999).

### **Summary**

The higher order dimension of neuroticism in the Eysenck Personality Profiler is made up of seven constructs, low self-esteem (inferiority/self-esteem), unhappiness (unhappy/happy), anxiety (anxious/calm), dependency (dependence/autonomy), hypochondriasis (hypochondria/sense of health), guilt (guilt/guilt freedom), and obsessiveness (obsessive/casual) the overall results reveal that in four out of the seven scales male clergy record significantly higher scores than men in the normal population. In comparison with men in general they display lower levels of self-esteem, higher levels of anxiety, dependency and guilt. On the other hand, there is no significant difference

between male clergy and men in the normal population on the scale of unhappiness and hypochondria. The male clergy also appear less obsessive than men in general.

On balance, male clergy appear more neurotic than the general population, which has been explained in terms of the male clergy having a feminine personality profile (Francis, 1991; Jones & Francis, 1992; Musson, 1998; Loudon & Francis, 1999).

Female clergy in comparison to women in the normal population score significantly lower on four out of the seven scales making up the higher order dimension of neuroticism. They are unhappiness, obsessiveness, dependency, anxiety. There is no significant difference between female clergy on the scale of hypochondria and guilt, but female clergy do score higher on the scale of low self-esteem. This finding that female clergy are more stable than women in the normal population is consistent with previous research into the masculine profile of female clergy (Francis, 1991; Francis & Kay, 1995; Robbins, Francis, Haley & Kay, 2001).

These data also demonstrate that male clergy score significantly higher in comparison to female clergy on two of the seven scales making up the higher order dimension of neuroticism. They are guilt and obsessiveness. There is no significant difference on three out of the seven scales, they are anxiety, dependence and hypochondria. Female clergy do, however, score higher on two scales, the low self-esteem scale and the dependence scale.

Male and female clergy emerge as having low opinions of themselves believing that they may be unattractive failures. Male clergy reveal themselves as easily upset by things that go wrong and are inclined to worry unnecessarily about things that may or may not happen, they show themselves as lacking self-reliance, and as people who may be pushed around by others and events. They may display unquestioning obedience to institutional power. Male clergy emerge as self-blaming, self-abasing and troubled by their conscience regardless of whether or not their behaviour is really morally reprehensible.

Female clergy on the other hand, reveal themselves to be generally cheerful and optimistic, who find life rewarding and are at peace with the world. They are placid, serene and resistant to irrational fears and anxieties. Female clergy enjoy a great deal of freedom and independence and make their own decisions.

## 9. Seven Aspects of Extraversion

### Overview

This chapter will investigate the higher order dimension of extraversion and its seven component parts. The seven component parts that make up the higher order dimension of extraversion are:

- Activity (active/inactive)
- Sociability (sociable/unsociable)
- Expressiveness (expressive/inhibited)
- Assertiveness (assertive/submissive)
- Achievement Orientation (ambitious/unambitious)
- Dogmatism (dogmatic/flexible)
- Aggressiveness (aggressive/peaceful)

This chapter will be subdivided into the seven component parts that make up the higher order factor of extraversion. Each of the component parts will be explored under eight sections. The first section gives the definition of the component part as defined by Eysenck and Wilson (1976). The second section investigates the relationship between scripture and the component part. The third section explores the psychological theory of the component part. Section four gives examples of empirical research already undertaken in relation to the component part and the psychology of religion. The fifth

section uses the findings of the previous sections to make a hypothesis on which to test the present data. Section six, investigates the scale properties of the component part. Section seven gives an interpretation of the findings. Finally section eight sets about making a conclusion.

The quantity of empirical research available for each component part varies greatly between one component part and another component part. This is due largely to the fact that some of the component parts have been researched more fully than others in the psychology of religion. The intention of including previous empirical research is to get a feel for what has already been done in that area of the psychology of religion and not to give a comprehensive review.

In section seven, interpreting the findings, comparisons will be made between male clergy and female clergy, between male clergy and the population norms for men in general and between female clergy and the population norms for women in general. Normative data for the 21 scales of the Eysenck Personality Profiler have been calculated by Eysenck, Wilson and Jackson (1999) on the basis of the responses of 697 men and 697 women.

## **Active (active/inactive)**

### ***Definition***

The first construct proposed by the Eysenck Personality Profiler within the higher order dimension of extraversion is anchored by the opposite poles 'active' and 'inactive'. In

their original formulation Eysenck and Wilson (1976) describe this construct as 'activity' and offer the following definition:

people scoring high on the activity sub-factor factor are generally active and energetic. They enjoy all kinds of physical activity including hard work and exercise. They tend to wake early and quickly in the morning, move rapidly from one activity to another, and pursue a wide variety of different interests. People with low scores on this scale are inclined to be physically inactive, lethargic and easily tired. They move about the world at a leisurely pace and prefer quiet, restful holidays.

The construct 'active' has not been of much interest to psychologists as a construct on its own but has been seen as part of the wider construct known as extraversion/introversion.

Costa and McCrae (1995) sees the extravert as someone who:

in addition to liking people and preferring large groups and gatherings, are also assertive, **active** and talkative; they like excitement and stimulation and tend to be cheerful in that they are upbeat, energetic and optimistic.

In a different context Osgood, Suci and Tannenbaum (1957) in their book *The Measurement of Meaning* see activity as one of three major dimensions of meaning. There are, however, few personality scales which include questions relating to activity, for example, Guilford (1934) in his scale and in his understanding of personality reflects the dimension of activity. Cattell, Eber and Tatsuoka (1970) in their inventory, the 16PF, have questions relating to activity in the form of choice of recreation and urges for physical workout.

### ***Scripture and activity***

In the Christian tradition there are two different ways of understanding the relationship between activity and Scripture. The first understanding is one which suggests that

religious people who put their faith in God should be active in their ministry modelling themselves on Jesus:

Then he went about among the villages teaching. He called the twelve and began to send them out two by two, and gave them authority over unclean Spirits. He ordered them to take nothing for their journey except a staff; no bread, no bag, no money in their belts (Matthew 6: 6-8).

Now, when Jesus returned, the crowd welcomed him, for they were all waiting for him. Just then there came a man named Jairus, a leader of the synagogue. He fell at Jesus' feet and begged him to come to his house, for he had an only daughter, about twelve years old, who was dying. As he went the crowd pressed in on him (Luke, 8: 40-42).

The second understanding suggests that religious people who put their faith in God should also spend time resting as Jesus himself did:

Now when Jesus heard this, he withdrew from there in a boat to a deserted place by himself (Matthew 14: 13).

He said to them, 'come away to a deserted place all by yourselves and rest awhile.' For many were coming and going and they had no leisure even to eat (Mark 6:31).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and activity.

### ***Psychological theory***

Searches have identified no theoretical studies in the psychology of religion which have specifically drawn on the construct of activity.

### ***Empirical evidence***

There is no available research into the relationship between religion and activity.

### ***Hypothesis***

There appears to be no empirical evidence or psychological theory to link activity and religion, whilst the Christian scriptures suggest that there should be a balance between activity and rest. On the basis of this information it is difficult to make a hypothesis.

### ***Scale properties***

Table 9.1 reports on the reliability of the 20 item index of activity and gives the item rest of scale correlations. The activity scale achieved an alpha coefficient of .77 for male clergy and .78 for female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the findings***

Table 9.2 presents the mean scale scores on the index of activity for male and female clergy separately and compares the scores with the norms provided in the test manual. These data demonstrate that men in the normal population score significantly higher on the activity scale in comparison with the scores recorded by the male clergy. The same is true for females in the normal population, they score significantly higher on the activity scale than the female clergy. There is, however, no significant difference between scores on the index of activity between the male and female norms and no significant difference

between the male and female clergy.

Table 9.1 Active (active/inactive) reliability analysis

	Item rest of scale correlation	
	Male	Female
If you think you may have to wait a few minutes for a lift are you inclined to take the stairs instead?	0.1042	0.0805
Are you always active and doing something when not actually sleeping?	0.4220	0.4426
Do you normally tend to do things at a rapid rate?	0.5052	0.5241
When you wake up in the morning are you usually full of energy and ready for the day ahead?	0.2880	0.3227
Are you inclined to rush from one activity to another without pausing for rest?	0.4046	0.3679
Are you happiest when you get involved in some project that calls for rapid action?	0.4129	0.3978
Do you often feel tired and listless?	0.2460	0.2895
Would you rather watch sports than play them?	0.1252	0.1835
Are you inclined to be slow and deliberate in your actions?	0.4022	0.4186
Do you generally move about at a leisurely pace?	0.4098	0.4357
At work or at play, do other people find it hard to keep up with the pace you set?	0.3994	0.4388
Are you frequently lacking in energy and motivation to do things?	0.3802	0.3290
Do you become restless when working at something in which there is little action?	0.2060	0.2232
Most days are there times when you enjoy just sitting and doing nothing?	0.2394	0.2499
Do you often find yourself hurrying to get to places even when there is plenty of time?	0.0909	0.1676
Do other people regard you as a very lively person?	0.4109	0.3699
Are you usually full of energy and vigour?	0.5631	0.5209
Do you like to have a lot of things to do all the time?	0.4709	0.4459
Do other people seem to get more done in a day than you?	0.3250	0.3559
Are you often bubbling over with excess energy?	0.3976	0.4076
Alpha	0.7745	0.7819

In summary, these data reveal that there was no significant difference between male and female clergy on the scale of activity. There was also no significant difference between

men and women in the normal population on the scale of activity.

Table 9.2 Mean scale cores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	21.67	7.70	26.91	7.21
Female	21.84	7.84	26.54	7.43

Male clergy/female clergy,	t = 0.416	p < NS
Male clergy/male norms,	t = 14.514	p < .001
Female clergy/female norms,	t = 12.732	p < .001
Male norms/female norms	t = 0.944	p < NS

Table 9.3 penetrates behind the overall mean scores recorded on the index of activity to examine the percentages of male and female clergy who endorse the individual items. These data demonstrate that almost three-quarters of male clergy take the stairs if they think they may have to wait a few minutes for a lift (72%). Over a half of male clergy are inclined to rush from one activity to another without pausing for rest (52%), are usually full of energy and vigour (54%) and like to have lots of things to do all the time (52%). Over two-fifths of male clergy are always active and doing something when not actually sleeping (47%), they normally do things at a rapid rate (46%) and find themselves hurrying to get to places even when they have plenty of time (49%).

On the other hand, only two-fifths of male clergy think that other people regard them as lively (43%), and generally move around at a leisurely pace (39%). Three-fifths of male

clergy say that most days there are times when they enjoy just sitting and doing nothing (60%). Just under a fifth of male clergy also claim not to be bubbling over with excess energy (18%) and almost a quarter are inclined to be slow and deliberate in their actions (24%).

These data also demonstrate that just over three-fifths of the female clergy take the stairs if they think they may have to wait a few minutes for a lift (62%). Over a half of female clergy are always active and doing something when not actually sleeping (52%), are inclined to rush from one activity to another without pausing for rest (54%) and like to have lots of things to do all the time (52%). Over two-fifths of female clergy tend to do things at a rapid rate (45%) and often find themselves hurrying to get to places even when there is plenty of time (44%).

On the other hand, almost three-fifths of female clergy say that most days there are times when they enjoy just sitting and doing nothing (59%). Nearly a half of female clergy would rather sit and watch sports than play them (46%) and around a third of female clergy generally move around at a leisurely pace (35%). Only a fifth of female clergy claim to be often bubbling over with excess energy (21%).

### ***Conclusion***

No hypothesis was made as to whether clergy would be more or less active than the general population because of the lack of previous research and psychological theory. The results from this survey have shown that male clergy are less active than men in the

normal population whilst the female clergy are also less active than the normal population.

Table 9.3 Percentage endorsements of the twenty items of the index active (active/inactive) of for male and female clergy

	Male %	Female %
If you think you may have to wait a few minutes for a lift are you inclined to take the stairs instead?	72	62
Are you always active and doing something when not actually sleeping?	47	52
Do you normally tend to do things at a rapid rate?	46	45
When you wake up in the morning are you usually full of energy and ready for the day ahead?	41	45
Are you inclined to rush from one activity to another without pausing for rest?	52	54
Are you happiest when you get involved in some project that calls for rapid action?	41	34
Do you often feel tired and listless?	34	36
Would you rather watch sports than play them?	36	46
Are you inclined to be slow and deliberate in your actions?	24	15
Do you generally move about at a leisurely pace?	39	35
At work or at play, do other people find it hard to keep up with the pace you set?	23	23
Are you frequently lacking in energy and motivation to do things?	17	14
Do you become restless when working at something in which there is little action?	45	36
Most days are there times when you enjoy just sitting and doing nothing?	60	59
Do you often find yourself hurrying to get to places even when there is plenty of time?	49	44
Do other people regard you as a very lively person?	43	57
Are you usually full of energy and vigour?	54	59
Do you like to have a lot of things to do all the time?	52	52
Do other people seem to get more done in a day than you?	40	37
Are you often bubbling over with excess energy?	18	21

## **Sociability (sociable/unsociable)**

### ***Definition***

The second construct proposed by the Eysenck Personality Profiler within the higher order dimension of extraversion is anchored by the opposite poles 'sociable' and 'unsociable'. In the original formulation Eysenck and Wilson (1976) describe this construct as sociability and offer the following definition:

high scorers on the sociability sub-factor seek out the company of other people, they like social functions such as parties and dances, they meet people easily and are generally happy and comfortable in social situations. Low scorers, by contrast prefer to have only a few special friends, enjoy solo activities such as reading, having difficulty finding things to talk about to other people, and are inclined to withdraw from oppressive social contacts.

The construct 'sociability' has long been of interest to psychologists and appears in many personality instruments including, for example, the California Psychological Inventory (Gough, 1975) which includes sociability in its measure of 18 variables, the Guilford Zimmerman Temperament Survey (Guilford, Zimmerman & Guilford, 1976) and the Dynamic Personality Inventory (DPI, Grygier & Grygier, 1976).

### ***Scripture and sociability***

In the Christian scriptures there are two different ways of understanding the relationship between sociability and Scripture. The first understanding is one which suggests that religious people who put their faith in God should be sociable. There are many instances in the ministry of Jesus where he is faced with large crowds and has to provide them with

food and be sociable. There are the narratives of the feeding of the four thousand and the feeding of the five thousand:

In those days when there was again a great crowd without anything to eat, he called his disciples and said to them, 'I have compassion for the crowd, because they have been with me now for three days and have nothing to eat. If I send them away hungry to their homes, they will faint on the way and some of them have come from a great distance.' His disciples replied, 'How can one feed these people with bread here in the desert?' He asked them, 'How many loaves do you have?' They said, 'seven.' Then he ordered the crowd to sit down on the ground; and he took the seven loaves, and after giving thanks he broke them and gave them to his disciples to distribute; and they distributed them to the crowd. They had also a few small fish; and after blessing them, he ordered that these too should be distributed. They ate and were filled; and they took up the broken pieces left over, seven baskets full. Now there were about four thousand people. And he sent them away. And immediately he got into the boat with his disciples and went to the district of Magdala (Mark 8: 1-10)

When he went ashore, he saw a great crowd; and he had compassion for them and cured their sick. When it was evening, the disciples came to him and said, 'This is a deserted place, and the hour is now late; send the crowds away so that they may go into the villages and buy food for themselves.' Jesus said to them, 'They need not go away; you give them something to eat.' They replied, 'We have nothing here but five loaves and two fish.' And he said, 'Bring them here to me.' Then he ordered the crowds to sit down on the grass. Taking the five loaves and the two fish, he looked up to heaven, and blessed and broke the loaves, and gave them to the disciples, and the disciples gave them to the crowds. And all ate and were filled; and they took up what was left over of the broken pieces, twelve baskets full. And those who ate were about five thousand men, besides women and children (Matthew 14: 14-21).

The second understanding suggests that people need time to be on their own and there are clearly times when Jesus and the disciples need to be on their own.

Immediately he made the disciples get into the boat and go on ahead to the other side, while he dismissed the crowds. And after he had dismissed the crowds, he went up the mountain by himself to pray. When evening came, he was there alone (Matthew 14: 22-23).

Then Jesus came from Galilee to John at the Jordan, to be baptized by him. John would have prevented him, saying, 'I need to be baptized by you, and do you come to me?' But Jesus answered him, 'let it be so now; for it is proper for us in this way to fulfill all righteousness.' Then he consented. And when Jesus had been baptized, just as he came up from the water, suddenly the heavens were opened to him and he saw the Spirit of God descending like a dove and alighting on him. And a voice from heaven said, 'This is my Son, the Beloved, with whom I am well pleased.' Then Jesus was led by the Spirit into the wilderness (Matthew 3:13 - 4:1).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between sociability and scripture.

### ***Psychological theory***

Sociability as a construct has had little attention paid to it by psychologists of religion from a theoretical perspective.

### ***Empirical evidence***

Bergin, Masters and Richards (1987) used Allport and Ross' (1967) Religious Orientation scale to measure intrinsic and extrinsic religiosity and the California Psychological Inventory (Gough, 1975) to assess the relationship between religiosity and certain personality variables. Sociability is one of the traits measured by the California Psychological Inventory (Gough, 1975) and Bergin, Masters and Richards (1987) found that sociability is positively correlated with intrinsic religiosity ( $p < .005$ ) and negatively correlated with extrinsic religiosity ( $p < .05$ ).

Robinson (1990) investigated the relationship between Eysenck's personality measures and religious orientation. He administered the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975); the Eysenck Personality Inventory, extraversion scale, (Eysenck & Eysenck, 1968) and the Religious Orientation Inventory (ROI, Allport & Ross, 1967) to 194 introductory Psychology students. In his analysis Robinson distinguished between the sociability and impulsivity components of extraversion in the Eysenck scale. The results showed a positive correlation between sociability and intrinsic religious orientation for both men ( $p < .05$ ) and women ( $p < .01$ ).

### ***Hypothesis***

The link between religion and sociability is tenuous. Psychologists of religion have not investigated the theoretical relationship between sociability and religion and the empirical evidence is limited to two studies. Both studies however, suggest that intrinsically religious people, those people who take their religion seriously and believe and practice it in all aspects of life, are more sociable people (Robinson, 1990). The Christian scriptures claim that there needs to be times of being sociable and there are times of quiet. From this limited information it is hypothesised that ministers of religion are people who take their religion seriously and who live out their faith and would therefore be more sociable than people in the normal population.

### ***Scale properties***

Table 9.4 reports on the reliability of the 20 item index of sociability and gives the item rest of scale correlations. The sociability scale achieved an alpha coefficient of .83 for

male clergy and .80 for female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

Table 9.4 Sociability (sociable/unsociable) reliability analysis

	Item rest of scale correlation	
	Male	Female
Is it important to you to be liked by a wide range of people?	0.1434	0.1719
Do you tend to limit your acquaintances to a select few?	0.3937	0.3668
Do you like to have many social engagements?	0.5510	0.5389
Are you more distant and reserved than most people?	0.5069	0.3795
Do you sometimes feel uncomfortable when people get too close to you physically?	0.2281	0.2428
Do you like mixing with lots of other people?	0.6722	0.6269
Are you relaxed and self-confident in the company of other people?	0.4659	0.3908
Are you fairly talkative when you are with a group of people?	0.4933	0.4316
Do you enjoy spending long periods of time by yourself?	0.3224	0.3042
Do you like going out a lot?	0.4883	0.4390
Do you usually prefer to take your recreation with companions rather than alone?	0.4055	0.3376
Do you enjoy solitary activities such as playing patience and solving crossword puzzles?	0.1920	0.1261
Do you like to be in the middle of things socially speaking?	0.5364	0.5703
Would you be very unhappy if you were prevented from making numerous social contacts?	0.4756	0.4911
Can you usually let go of your inhibitions and have a good time at a party?	0.4623	0.3781
Are you apprehensive about going into a room full of strange people?	0.3899	0.3117
Do you enjoy entertaining people?	0.4261	0.3444
Would you rather spend an evening talking to one interesting person than singing and dancing with a large crowd of friends?	0.2645	0.2977
Do you spontaneously introduce yourself to strangers at social gatherings?	0.4086	0.3434
Do you like to tell jokes and stories to groups of friends?	0.2952	0.3066
Alpha	0.8297	0.8026

### *Interpreting the findings*

Table 9.5 presents the mean scale scores on the index of sociability for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate that the men in the normal population score significantly higher on the scale of sociability than male clergy. The same is true of female clergy: they score significantly lower than females in the general population. Male clergy score significantly higher than female clergy on the sociability scale and men in the normal sample score significantly higher on the scale of sociability than women in the normal population.

The findings suggest that men and women in the normal population are more sociable than the male and female clergy and that male clergy are more sociable than female clergy.

Table 9.5 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	23.19	8.36	27.74	8.02
Female	21.62	7.78	27.01	7.94

Male clergy/female clergy,	t = 3.567	p < .001
Male clergy/male norms,	t = 11.509	p < .001
Female clergy/female norms,	t = 11.836	p < .001
Male norms/female norms	t = 1.708	p < .05

Table 9.6 penetrates behind the overall mean scores recorded on the index of sociability to examine the percentage of male and female clergy who endorse individual items. Three-quarters of male clergy would rather spend an evening talking to one interesting

person than singing and dancing with a large crowd of friends (75%). Around three-fifths of male clergy enjoy spending long periods of time by themselves (57%). Around two-fifths of male clergy enjoy solitary activities such as playing patience and solving crossword puzzles (39%), are apprehensive about going into a room full of strange people (42%) and feel uncomfortable when people get too close to them physically (43%).

Table 9.6 Percentage endorsement of the twenty items of the index of sociability (sociable/unsociable) for male and female clergy

	Male %	Female %
Is it important to you to be liked by a wide range of people?	67	72
Do you tend to limit your acquaintances to a select few?	31	19
Do you like to have many social engagements?	37	30
Are you more distant and reserved than most people?	25	17
Do you sometimes feel uncomfortable when people get too close to you physically?	43	51
Do you like mixing with lots of other people?	58	61
Are you relaxed and self-confident in the company of other people?	66	65
Are you fairly talkative when you are with a group of people?	61	61
Do you enjoy spending long periods of time by yourself?	57	69
Do you like going out a lot?	46	38
Do you usually prefer to take your recreation with companions rather than alone?	61	56
Do you enjoy solitary activities such as playing patience and solving crossword puzzles?	39	57
Do you like to be in the middle of things socially speaking?	41	38
Would you be very unhappy if you were prevented from making numerous social contacts?	37	31
Can you usually let go of your inhibitions and have a good time at a party?	49	45
Are you apprehensive about going into a room full of strange people?	42	52
Do you enjoy entertaining people?	79	75
Would you rather spend an evening talking to one interesting person than singing and dancing with a large crowd of friends?	75	81
Do you spontaneously introduce yourself to strangers at social gatherings?	44	46
Do you like to tell jokes and stories to groups of friends?	55	35

There are, however, around three-fifths of male clergy who like mixing with lots of people (58%), are talkative when they are with a group of people (61%) and prefer to take their recreation with companions rather than alone (61%). Also just under four-fifths of male clergy enjoy entertaining people (79%).

These data also demonstrate that around three-fifths of female clergy enjoy solitary activities, like playing patience and solving crossword puzzles (57%) and over four-fifths of female clergy would rather spend an evening talking to one interesting person than singing and dancing with a large crowd of friends (81%). Less than two-fifths of the female clergy like going out a lot (38%) and like to be in the middle of things socially speaking (38%).

On the other hand, over three-fifths of female clergy like mixing with lots of other people (61%) and are fairly talkative with a group of people (61%). Well over a half of female clergy would prefer to take recreation with companions rather than alone (56%) and three-quarters of female clergy enjoy entertaining people (75%).

### ***Conclusion***

The data demonstrate that the clergy score significantly lower on the scale of sociability than men and women in the normal population. The hypothesis that clergy would be more sociable was not borne out.

**Expressiveness (expressive/inhibited)**

## ***Definition***

The third construct proposed by the Eysenck Personality Profiler within the higher order dimension of extraversion is anchored by the opposite poles 'expressive' and 'inhibited'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'expressiveness' and offer the following definition:

the sub factor of expressiveness refers to a general tendency to display one's emotion outwardly and openly, whether sorrow, anger, fear, love or hate. High scorers tend to be sentimental, sympathetic, volatile and demonstrative; low scorers are reserved, even - tempered, cool, detached, and generally controlled as regards the expression of their thoughts and feelings. This factor, taken to extreme, refers to behaviour that is classically called 'hysterical', therefore it will come as no surprise to learn that, even though it is primarily a component of extraversion, it is also tilted slightly in the direction of emotional instability.

The term expressive can be used in a variety of ways. It can be used to describe the feelings and emotions a person has or it may be used to describe the actions and behaviour of a person. An early psychologist, named Wundt believed that emotional experience can be described in terms of combinations of three dimensions, pleasantness-unpleasantness, calm-excitement and relation-tension Whilst Ekman, Friesen, and Ellsworth (1972) identified six primary emotions, surprise, fear, disgust, anger, happiness and sadness. They believed these to be universal and expressed facially. Psychologists believe that emotions and their expression evolved to deal with the basic tasks of life (Averill, 1994; Ekman, 1994; Buss 1997). Psychologists have theoretically tried to explain the construct 'expressive' but there has very little empirical research undertaken.

## ***Scripture and expressiveness***

In the Christian tradition there are two different ways of understanding the relationship

between expressiveness and Scripture. The first understanding is one which suggests that religious people who put their faith in God should be expressive and follow the example of Jesus:

As he came near and saw the city, he wept over it, saying, 'if you, even you, had only recognised on this day the things that make for peace! But now they are hidden from your eyes (Luke 19: 41-42).

When Jesus saw her weeping, and the Jews who came with her also weeping, he was greatly disturbed in Spirit and deeply moved. He said, 'Where have you laid him?' They said to him, 'Lord come and see.' Jesus began to weep. So the Jews said, 'See how he loved him!' (John 11: 33-36)

The second understanding suggests that the Christian person should be encouraged to be controlled, cool and detached:

Accordingly, though Jesus loved Martha and her sister and Lazarus, after having heard that Lazarus was ill, he stayed two days longer in the place where he was (John 11: 5-6).

They bound Jesus, led him away, and handed him over to Pilate. Pilate asked him, 'Are you the King of the Jews?' He answered him, 'You say so.' Then the chief priests accused him of many things. Pilate again asked him, 'Have you no answer? See how many charges they bring against you.' But Jesus made no further reply, so that Pilate was amazed (Mark 15: 1b-5).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between expressiveness and scripture.

### ***Psychological theory***

Durkheim (1915) believed that the origin of religion lay in 'collective effervescence,' that is intense emotional arousal. This intense emotional arousal is often seen in the

worship of charismatic and Pentecostal groups (Beit-Hallahmi and Argyle, 1997). There has, however, been very little research into religion and expressiveness.

### ***Empirical evidence***

Balswick and Balkwell (1978) explored the relationship between religious orthodoxy and emotional feeling and expression. Data were collected by questionnaire from a sample of 1,092 Georgia high school students. The results showed that both the feeling and expression of love and happiness were associated with high religious orthodoxy, while both feeling and expression of hate tended to be associated with low religious orthodoxy.

### ***Hypothesis***

The link between religion and expressiveness is tenuous. The psychologists of religion have seen expressiveness in terms of charismatic worship whilst empirical research has interpreted expressiveness in terms of the emotional feelings of love and happiness. The Christian scriptures show both expressiveness and cool detachment. In view of these different approaches to religion and expressiveness it is difficult to make a hypothesis.

### ***Scale Properties***

Table 9.7 reports on the reliability of the 20 item index of expressiveness and gives the item rest of scale correlations. The expressive scale achieved an alpha coefficient of .54 for the male clergy and .51 for the female clergy. Both alpha coefficients are below the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous

psychometric instrument.

### ***Interpreting the findings***

Table 9.8 presents the mean scale scores on the index of expressiveness for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate that the men in the general population score significantly higher on the expressiveness scale than male clergy.

The same is true for women, women in the general population score significantly higher on the expressiveness scale than female clergy. Whilst, male clergy score significantly higher on the expressiveness scale than female clergy and women in the general population score significantly higher on the expressive scale than men in the general population. These findings suggest that men and women in the normal population are more expressive male and female clergy and male clergy are more expressive than female clergy.

Table 9.9 penetrates behind the overall mean scores recorded on the index of expressiveness to examine the percentage of male and female clergy who endorse individual items. Two-fifths of male clergy find that their anger is quick and short (40%). Just over three-fifths of male clergy endorse the fact when they are angry with someone they wait until they have calmed down before talking to them about the incident (62%).

Table 9.7 Expressiveness (expressive/inhibited) reliability analysis

	Item rest of scale correlation	
	Male	Female
Is your anger quick and short?	0.1537	0.1509
If you were visiting Rio de Janeiro during carnival time would you rather observe the festivals than take part in them?	0.1874	0.2905
When you are angry with someone do you wait until you have calmed down before tackling them about the incident?	0.2000	0.1893
Have you ever been involved as a performer in amateur dramatics or musical groups?	0.1373	0.0891
Do you subscribe to the philosophy of 'eat, drink and be merry for tomorrow we die'?	0.2014	0.1388
Are you prone to exaggeration and elaboration when relating a story to your friends?	0.2618	0.1643
Would you say that your temper is well controlled?	0.1843	0.1705
Do you wish that you were able to lose your inhibitions and have good time more often?	-0.0054	-0.0015
Are you usually among the last to stop clapping at the end of a concert or stage performance?	0.1228	0.2239
Can you keep an exciting secret for a long period of time?	0.1527	0.0725
Do you tend to swear loudly if you trip over something or hit your finger with a hammer?	0.2621	0.2498
Are you forever buying silly little gifts for people even though there is no occasion that calls for it?	0.2038	0.2055
Do you like to play practical jokes on other people?	0.1690	0.1881
Do you get very upset when watching documentaries about living conditions in less fortunate countries?	0.1146	0.1120
If somebody expresses an opinion with which you disagree do you tell them so immediately?	0.1331	0.0725
Are you given to making outrageous threats even though you have no intention of carrying them out?	0.1349	0.1614
Do you get so excited that you gesticulate when you talk?	0.2121	0.2115
If you are watching a slapstick film or farcical play do you laugh louder than most of the people around you?	0.2500	0.1632
Are you so affected by music that you are usually compelled to conduct or dance in time with it?	0.2213	0.2532
Do you tell your friends what you think is wrong with them?	0.1627	0.0311
Alpha	0.5362	0.5063

Whilst just over four-fifths say that their temper is well controlled (81%). Three-quarters of male clergy have been involved as a performer in amateur dramatics or musical groups (75%) and nearly three-fifths of male clergy get so excited that they gesticulate when they talk (59%).

Table 9.8 Mean scale cores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	14.29	5.18	17.21	6.05
Female	13.21	4.77	18.74	6.22

Male clergy/female clergy,  $t = 4.050$   $p < .001$

Male clergy/male norms,  $t = 11.007$   $p < .001$

Female clergy/female norms,  $t = 16.935$   $p < .001$

Male norms/female norms  $t = 4.655$   $p < .001$

On the other hand, only a third or more of male clergy are prone to exaggeration and elaboration when relating a story to a friend (36%), wish they could loose their inhibitions and have a good time more often (36%) and are affected by music so that they are compelled to conduct or dance in time with the music (33%).

Just over four-fifths of female clergy say that their temper is well controlled (84%) and three-quarters of female clergy have been involved as a performer in amateur dramatics or musical groups (76%). Well over three-fifths of female clergy get so excited that they gesticulate when they talk (66%) and when they are angry with someone they wait until they have calmed down before talking to them about the incident (68%). Just over two-fifths of female clergy find that their anger is quick and short (42%).

Table 9.9 Percentage endorsement of the twenty item of the index of expressiveness (expressive/inhibited) for male and female clergy

	Male %	Female %
Is your anger quick and short?	40	42
If you were visiting Rio de Janeiro during carnival time would you rather observe the festivals than take part in them?	60	62
When you are angry with someone do you wait until you have calmed down before tackling them about the incident?	62	68
Have you ever been involved as a performer in amateur dramatics or musical groups?	75	76
Do you subscribe to the philosophy of 'eat, drink and be merry for tomorrow we die'?	11	10
Are you prone to exaggeration and elaboration when relating a story to your friends?	36	32
Would you say that your temper is well controlled?	81	84
Do you wish that you were able to lose your inhibitions and have a good time more often?	36	37
Are you usually among the last to stop clapping at the end of a concert or stage performance?	26	20
Can you keep an exciting secret for a long period of time?	73	78
Do you tend to swear loudly if you trip over something or hit your finger with a hammer?	38	39
Are you forever buying silly little gifts for people even though there is no occasion that calls for it?	7	16
Do you like to play practical jokes on other people?	34	11
Do you get very upset when watching documentaries about living conditions in less fortunate countries?	57	70
If somebody expresses an opinion with which you disagree do you tell them so immediately?	26	19
Are you given to making outrageous threats even though you have no intention of carrying them out?	2	2
Do you get so excited that you gesticulate when you talk?	59	66
If you are watching a slapstick film or farcical play do you laugh louder than most of the people around you?	29	13
Are you so affected by music that you are usually compelled to conduct or dance in time with it?	33	32
Do you tell your friends what you think is wrong with them?	6	3

On the other hand, only a third of the female clergy are prone to exaggeration and elaboration when relating a story to a friend (32%), and are affected by music so that they are compelled to conduct or dance in time with the music (32%). Almost two-fifths of the female clergy wish they could loose their inhibitions and have a good time more often (37%).

### ***Conclusion***

The data demonstrate that both men and women in the normal population score higher on the scale of expressiveness than male and female clergy.

## **Assertiveness (assertive/submissive)**

### ***Definition***

The fourth construct proposed by the Eysenck Personality Profiler within the higher order dimension of extraversion is anchored by the opposite poles 'assertive' and 'submissive'. In this original formulation Eysenck and Wilson (1976) describe this construct as assertive and offer the following definition:

high scorers on the assertiveness sub-factor have what is sometimes called a 'strong personality'; they are independent, dominant, and stand up for their rights, perhaps to the extent of being viewed as 'pushy'. Low scorers are humble, timid, submissive, disinclined to take any initiative in an interpersonal situation, and may be easily imposed upon.

The construct 'assertiveness' has been of little interest to psychologists and has given rise to very few instruments to measure the construct. In fact, assertiveness has been measured only in personality questionnaires, like, for example, the 16PF (Cattell, Eber &

Tatsuoka, 1970) and the Guilford-Zimmerman Temperament survey (Guilford, Zimmerman & Guilford, 1976).

Psychologists have, however, analysed the interactions of people in small groups and have shown that the types of interactions that occur can be categorized along two basic, independent dimensions. The first dimension is an affiliation dimension of warmth and harmony versus rejection and hostility, the second is an assertiveness dimension of dominance and task-orientation versus submission and deference (Friedman & Schustack, 1999).

### *Scripture and assertiveness*

In the Christian tradition there are two different ways of understanding the relationship between assertiveness and Scripture. The first understanding is one which suggests that religious people, who put their faith in God should show some assertiveness. Jesus is seen at times to be very assertive:

Blessed are the poor in Spirit, for theirs is the Kingdom of Heaven.  
Blessed are those who mourn, for they will be comforted.  
Blessed are the meek, for they will inherit the earth.  
Blessed are those who hunger and thirst for righteousness for they will be filled.  
Blessed are the merciful, for they will receive mercy.  
Blessed are the pure in heart, for they will see God.  
Blessed are the peacemakers, for they will be called children of God.  
Blessed are those who are persecuted for righteousness' sake for theirs is the Kingdom of Heaven.  
Blessed are you when people revile you and persecute you and utter all kinds of evil against you falsely on my account.  
Rejoice and be glad, for your reward is great in heaven, for in the same way they persecuted the prophets who were before you (Matthew 5: 3-12).

Then there is the scene after the coming of the Holy Spirit where Peter stands and addresses the crowd:

But Peter, standing with the eleven, lifted up his voice and addressed them, 'Men of Judea and all who live in Jerusalem, let this be known to you, and listen to what I say. Indeed these are not drunk, as you suppose, for it is only nine o'clock in the morning. You that are Israelites listen to what I have to say: Jesus of Nazareth, a man attested to you by God with deeds of power, wonders, and signs that God did through him among you, as you yourselves know - this man, handed over to you according to the definite plan and foreknowledge of God, you crucified and killed by the hands of those outside the law. But God raised him up, having freed him from death, because it was impossible for him to be held in its power (Acts 2: 14-15; 22-24).

The second understanding suggests that religious people are required to be submissive:

Then Mary said, 'Here am I, the servant of the Lord; let it be with me according to your word' (Luke 1:38).

But the tax-collector, standing far off, would not even look up to heaven, but was beating his breast and saying, 'God be merciful to me a sinner!' I tell you, this man went down to his home justified rather than the other; for all who exalt themselves will be humbled, but all who humble themselves will be exalted (Luke 18: 13-14).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between assertiveness and scripture.

### ***Psychological theory***

There is very little research in the psychology of religion on the construct assertiveness and religion from a theoretical perspective. The main body of research is as a result of other research into personality and the clergy.

### ***Empirical evidence***

Musson (1998) administered the 16PF (Cattell, Eber, & Tatsuoka, 1970) questionnaire to 441 male Anglican clergy of the Church of England. The results showed that there was no significant difference in assertiveness between clergymen and the normal population.

Childers and White (1966) administered the 16PF to 72 male students at a southern theological institution in the United States of America. The results showed that these students were more submissive than men in general.

Chalmers (1969) administered the 16 PF to 114 active Seventh day Adventist ministers in the United States of America. The results showed that these ministers were more submissive than men in general.

Cattell, Eber and Tatsuoka (1970) administered the 16PF to 1,707 Roman Catholic clergy from the United States of America. The results showed that these Roman Catholic clergy were more submissive than men in general.

Nauss (1972a) administered the 16PF to 255 persisting seminarians from Springfield, Illinois. The results showed that these seminarians were more submissive than men in general.

Nauss (1972b) administered the 16PF to 64 graduating seminarians from Springfield, Illinois. The results showed that these seminarians were more submissive than men in

general.

Pallone and Banks (1968) administered the 16PF to 21 Seventh-day Adventists from a seminary in North America. The results showed that these seminarians were more submissive than men in general.

Godwin (1990) administered the 16PF to 252 new staff applicants for the Campus Crusade for Christ in the United States of America. The results showed that these applicants were more submissive than men in general.

### ***Hypothesis***

The link between religion and assertiveness has been shown mainly through work undertaken to investigate the personality profiles of ministers of religion. There is no psychological theory about assertiveness and religion and the empirical evidence has concentrated on those in ministry. The Christian scriptures suggests that being assertive is as important as being submissive. The empirical evidence does, however, suggests that people in training for ministry, and people in full-time ministry are more submissive than people in the general population. It would be expected from the empirical evidence presented that ministers of religion would be more submissive than people in the normal population

### ***Scale properties***

Table 9.10 Assertiveness (assertive/submissive) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you usually dissociate yourself from political protests?	0.1983	0.2139
Do you always argue if you think you are right?	0.2697	0.2439
Are you too often 'pushed around' by other people?	0.3552	0.3508
Do you find it difficult to get rid of a sales-person who is persistent and wasting your time?	0.3221	0.1995
If you have been given poor service in a restaurant or hotel do you prefer to let it pass than make a fuss?	0.3780	0.3649
Do you hesitate to ask a stranger for directions in the street?	0.2233	0.1593
Can you always think of a good excuse if the situation demands it?	0.2436	0.3202
Would you rather take orders than give them?	0.3632	0.3998
Do you think that playing the game in a sporting manner is more important than winning a contest?	0.0475	0.0672
Would you like to appear on television stating your political opinions?	0.2628	0.2944
As a child did you usually do as you were told?	0.1417	0.1483
Do you express your opinions very forcefully?	0.4248	0.4003
Do you always stand up for your rights?	0.3789	0.4537
Do you prefer to stay in the background rather than push yourself forward?	0.5011	0.4431
If you were working on a committee would you tend to take charge of things?	0.4522	0.3886
Do you sometimes wish you could be more assertive?	0.4258	0.4111
Do you usually make the decisions when you are with a group of people?	0.4087	0.3555
If someone pushed in front of you in a queue, would you do something about it?	0.2629	0.2926
Do you hesitate to take a front seat in a lecture room because you don't like to be conspicuous?	0.2538	0.3006
If somebody smoking nearby was annoying you would you ask them to stop?	0.2428	0.2880
Alpha	0.7487	0.7470

Table 9.10 reports on the reliability of the 20 item index of assertiveness and gives the item rest of scale correlations. The assertive scale achieved an alpha coefficient of .75

for males and .75 for females. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### *Interpreting the findings*

Table 9.11 presents the mean scale scores on the index of assertiveness for male and female clergy separately and compares the scores with the norms provided in the test manual. These data demonstrate that the men in the normal population score significantly higher on the scale of assertiveness than male clergy. The females in the normal sample score significantly higher on the scale of assertiveness than the female clergy. The male score significantly higher on the scale of assertiveness than the female clergy. The male clergy score significantly higher on the scale of assertiveness than the female clergy. The male norms are significantly higher than the female norms on the assertiveness scale. These data demonstrate that men and women in the normal population are more assertive than male and female clergy and that male clergy are significantly more assertive than female clergy.

Table 9.11 Mean scales scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	19.50	7.04	24.32	6.90
Female	17.83	6.86	22.41	7.38

  

Male clergy/female clergy,	t = 4.532	p< .001
Male clergy/male norms,	t = 14.365	p< .001
Female clergy/female norms,	t = 11.054	p< .001
Male norms/female norms	t = 4.991	p< .001

Table 9.12 penetrates behind the overall mean scores recorded on the index of assertiveness to examine the percentage of male and female clergy who endorse the individual items. These data demonstrate that just over four-fifths of male clergy think that playing the game in a sporting manner is more important than winning the contest (81%) and just over three-quarters of male clergy as children usually did as they were told (76%). Well over a half of male clergy won't make a fuss in a restaurant if they have been given poor service (56%). Over two-fifths of male clergy usually dissociate themselves from political protests (45%), prefer to stay in the background rather than push themselves forward (41%) and would not do anything about someone pushing in front of them in a queue (44%).

On the other hand, over two-fifths of male clergy express their opinions very forcefully (44%) and when working on a committee would tend to take charge of things (41%). Nearly two-fifths of male clergy always argue if they think they are right (36%).

These data also demonstrate that well over four-fifths of female clergy think that playing the game in a sporting manner is more important than winning the contest (85%) and as children did as they were told (82%). Well over a half of the female clergy won't make a fuss in a restaurant if they have been given poor service (57%). Over two-fifths of female clergy usually dissociate themselves from political protests (46%). Over a half of the female clergy prefer to stay in the background rather than push themselves forward (52%) and would hesitate to take the front seat in a lecture room because they don't like to be conspicuous (51%). Only three in ten of female clergy always argue if they think

they are right (32%).

Table 9.12 Percentage endorsement of the twenty item of the index of assertiveness (assertive/submissive) for male and female clergy

	Male %	Female %
Do you usually dissociate yourself from political protests?	45	46
Do you always argue if you think you are right?	36	32
Are you too often 'pushed around' by other people?	15	17
Do you find it difficult to get rid of a sales-person who is persistent and wasting your time?	19	17
If you have been given poor service in a restaurant or hotel do you prefer to let it pass than make a fuss?	56	57
Do you hesitate to ask a stranger for directions in the street?	22	10
Can you always think of a good excuse if the situation demands it?	56	47
Would you rather take orders than give them?	18	21
Do you think that playing the game in a sporting manner is more important than winning a contest?	81	85
Would you like to appear on television stating your political opinions?	16	7
As a child did you usually do as you were told?	76	82
Do you express your opinions very forcefully?	44	36
Do you always stand up for your rights?	25	26
Do you prefer to stay in the background rather than push yourself forward?	41	52
If you were working on a committee would you tend to take charge of things?	41	36
Do you sometimes wish you could be more assertive?	31	22
If someone pushed in front of you in a queue, would you do something about it?	44	32
Do you hesitate to take a front seat in a lecture room because you don't like to be conspicuous?	42	51
If somebody smoking nearby was annoying you would you ask them to stop?	36	33

### *Conclusions*

These data demonstrate that male and female clergy are significantly less assertive than men and women in the normal population when using the Eysenck Personality Profiler.

This finding proves the hypothesis that ministers of religion would be more submissive than the normal population and is consistent with previous research when using a different instrument namely the 16PF (Cattell, Eber & Tatsuoka, 1970) among students in training for ministry (Childers & White, 1966; Nauss, 1972a; Pallone & Banks, 1968) and among those in ministry (Chalmers, 1969; Cattell, Eber & Tatsuoka, 1970).

## **Achievement Orientation (ambitious/unambitious)**

### ***Definition***

The fifth construct proposed by the Eysenck Personality Profiler within the higher order dimension of extraversion is anchored by the opposing poles 'ambitious' and 'unambitious'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'achievement orientation' and offer the following definition:

high scorers on the achievement orientation sub-factor are ambitious, hard-working, competitive, keen to improve their social standing, and place a high value on productivity and creativity. Low scorers place little value on competitive performance or creative output. Many are also apathetic, retiring and aimless, but these are not invariable characteristics of the person without strong achievement motivation.

The construct achievement orientation has long been of interest to psychologists and sociologists and has given rise to a wide range of research. One of the problems, however, is the lack of any consensus in measuring achievement orientation. It has been measured, for example, through social class, fathers occupation, income level and by the thematic appreciation test (McClelland, Atkinson, Clark & Lowells, 1953) and by Hollinghead's (1953) index of social position.

### ***Scripture and achievement orientation***

In the Christian tradition there are two different ways of understanding the relationship between achievement orientation and Scripture. The first understanding is one which suggests that religious people, who put their trust in God should work hard. For example in the Old Testament Scriptures the Book of Proverbs provides an example and in the New Testament, the letter to the Thessalonians:

Go to the ant you lazybones: consider its ways, and be wise without having any chief, or officer, or ruler, it prepares its food in summer and gathers its sustenance in harvest. How long will you lie there, O Lazybones? When will you arise from your sleep? A little sleep, a little slumber a little folding of the hands to rest, and poverty will come upon you like a robber and want like an armed warrior (Proverbs 6: 6-11).

Now we command you, beloved, in the name of our Lord Jesus Christ, to keep away from believers who are living in idleness and not according to the tradition that they received from us. For you yourselves know you ought to imitate us; we were not idle when we were with you, and we did not eat anyone's bread without paying for it; but with toil and labour we worked night and day, so that we might not burden any of you. This was not because we did not have the right, but in order to give you an example to imitate. For even when we were with you, we gave you this command: Anyone unwilling to work should not eat. For we hear that some of you are living in idleness, mere busybodies, not doing any work. Now such persons we command and exhort in the Lord Jesus Christ to do their own living. Brothers and sisters do not weary in doing what is right (2 Thessalonians 3: 6-13).

The second understanding is the very opposite and suggests that the Christian should not toil and they should rest. For example:

Consider the lilies of the field, how they grow; they neither toil nor spin, yet I tell you, even Solomon in all his glory was not clothed like one of these (Matthew 6: 28-29).

So then, a sabbath rest still remains for the people of God; for those who enter God's rest also cease from their labours as God did from his. Let us

therefore make every effort to enter that rest, so that no one may fall through such disobedience as theirs (Hebrews 4: 9-11).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between achievement orientation and scripture.

### ***Psychological theory***

It was John Calvin the Protestant reformer who emphasised the importance of thrift, industry, and hard work as moral virtues. But it was not until the early twentieth century that a connection was made between the rise in capitalism and Calvinistic Protestantism.

It was Max Weber (1904) who observed that the rise of Protestantism coincided with the rise in capitalism in several European countries, and that Protestant entrepreneurs did better than Catholic ones. Protestants he found seemed to work harder, save more money, and do better economically. Basic to this thesis was the idea that the Protestant work ethic provided moral justification for the accumulation of wealth. Puritan theologians had articulated the belief that the honest acquisition of capital is a calling and is a testament to people's glorification of God, and that economic success was a sign of election to a state of grace (Mirels & Garrett, 1971).

Weber reasoned, first, concerning salvation, that an important aspect of the Protestant theological position was the shift from reliance on an institution (the church) to a greater reliance upon self. It seemed reasonable to assume that Protestant parents who prepared

their children for increased self-reliance in religious matters would also tend to stress the necessity for children to be self-reliant in other aspects of their life. Secondly, Weber's description of the personality types produced by the Reformation is very similar to the picture of the person with high achievement motivation (Rosen, 1959).

The hypothesis deduced from these observations were put into psychological terms by McClelland (1961) who questioned white Protestant, Irish-Catholic, Italian-Catholic, and Jewish mothers about their independence training practices. He found that Protestants and Jews favoured earlier independence training compared with Irish-Catholics and Italian-Catholics. McClelland's work on the development of motivation to achieve was measured by counting the number of times children's stories contained what McClelland considered to be achievement related aspects of fantasy.

Another major contributor to Weber's work ethic was Lenski (1963) and his sociological analysis of religion. To measure the work ethic of his participants Lenski asked the question, 'What do you most look for in a job?' The results showed that Protestants enjoy a higher socio-economic position and are more upwardly mobile than Catholics.

This research style set the agenda for a large amount of similar research which is reviewed by Bouma (1973). Bouma (1973) suggested that the research into the Protestant work ethic can be grouped under three general propositions:

1. The beliefs and norms of ascetic Protestantism gives Protestants greater social mobility than those with other religious beliefs, the end result being higher social status for Protestants and Roman Catholics.

2. Ascetic Protestant beliefs and norms produce achievement motivation among Protestants that is higher than that among Roman Catholics.
3. Ascetic Protestant beliefs and norms predispose Protestants to make more effectual use of educational opportunities than do Roman Catholics.

There is, however, no consistent evidence as to whether religious people have stronger achievement motivation, make more money or have better jobs (Beit-Hallahmi & Argyle, 1997). Bouma (1973) claims this is because of inadequate research tools employed to test this theory.

### ***Empirical evidence***

Rosen (1959) investigated the relationship between race, ethnicity, and achievement syndrome among a sample of 954 people in four north-eastern states of the USA. The sample consisted of 427 pairs of mothers and their sons. The subjects were asked in personal interviews to designate their religion and land of national origin. Social class was measured by a modified version of Hollinghead's (1953) index of social position which uses the occupation and education of the main wage earner, usually, the father, as the principal criteria of status. Achievement motivation was measured by McClelland, Atkinson, Clark and Lowell's (1953) Thematic Appreciation Test. This test identifies and counts the frequency with which imagery about evaluated performance in competition with a standard of excellence appears in the thoughts of people when they tell a brief story under time pressure. The results showed that the groups place different emphases upon independence and achievement training in the rearing of children. As a consequence, achievement motivation is more characteristic of Greeks, Jews and white

Protestants than of Italians, French-Canadians and Negroes. The data also indicate that Jews, Greeks and Protestants are more likely to possess achievement values and higher educational and vocational aspirations than Italians and French-Canadians.

Mayer and Sharp (1962) using data from the 1954 and 1959 Detroit area study found that differing religious preferences are associated with varying degrees of worldly success. Their sample consisted of around 9,000 adults from various religious denominations. Their results show that Jews show the greatest achievement followed by Episcopalians and Calvinists. The lowest achievement was amongst Baptists and Catholics.

Veroff, Field and Gurin (1962) use data from the 1957 survey of mental health to assess the relationship between achievement motivation and religion. The sample consisted of 1,620 men and women who completed a thematic apperceptive measure of achievement motivation and recorded their religious preferences. The results show that Jews have a higher achievement orientation than Catholics or Protestants and that Catholics had a higher achievement orientation than Protestants.

Greeley (1963) in a sample of American University graduates found that Catholics were just as achievement-orientated as the rest of the sample, and even more interested in economic success.

Glenn and Hyland (1967) using data from 18 national surveys conducted between 1943 and 1965 found that at the end of World War 2, Protestants in the United States ranked

well above Catholics in income, occupation and education. Since then Catholics have gained dramatically and have surpassed Protestants in most aspects of status.

Jackson, Fox and Crockett (1970) analysed a United States of America national survey made in 1957. The sample consisted of 766 white males, and the respondents were asked about their religious preference, their occupation and their father's occupation. The results indicate several religious differences in occupational achievement. First, Protestants are more likely than Catholics of the same occupational origin to enter high-status non-manual occupations. Second, Catholics are more likely than Protestants of the same origin to enter low-status non-manual occupations. Third, Protestants are more likely than Catholics to be upwardly mobile and Catholics were more likely to be downward mobile. Overall the results indicate that Protestant-Catholic differences in achievement are generally small.

Featherman's (1971) investigation into the socio-economic achievement of white religio-ethnic subgroups is based on a secondary analysis of longitudinal data from the Princeton Fertility Study (Westoff, Potter, Sagi & Mishler, 1961). The subjects consist of 715 male respondents. A series of questions were asked about the respondent's ethnic background, their income level, and their educational level. The results show that Jews, regardless of their ethnic ancestry, attain high levels of education, occupation and income, whilst Roman Catholics of Italian and Mexican heritage achieve the lowest levels. Featherman concludes his article by claiming that the Jews and the Anglo-Saxon Protestants share the work values associated with what has been called 'the Protestant work ethic.'

Schuman (1971) found no difference between Catholics and Protestants in attitude towards work, spending or consumption, among a sample of 1,484 people. Results supporting the hypothesis that Protestants would be in more advanced positions in their jobs than Catholics were reported by Jackson and Cockett (1964).

Stryker (1981) uses data from a longitudinal study of Wisconsin high-school seniors. The sample consisted of 4,309 white males. The results showed that religio-ethnicity has a significant net affect on parental encouragement and occupational aspirations. The Jewish group ranked higher in its positive orientation to education and occupational status.

Homola, Knudsen and Marshall, (1987) report data from several United States surveys and used a sample totalling 12,120. The results show that the Jews have the highest achievement levels in terms of number of years in education, the highest job status and the highest income, followed by the Episcopalians. The Methodists and Catholics comprise the middle categories and the Baptists have the lowest number of years in education, the lowest job status and the lowest income.

Giorgi and Marsh (1990) used data from the European Values survey to investigate the relationship between religion and the Protestant work ethic. They found no difference in work ethic between those who claimed to be religious and those who claimed not to be religious. They did find, however, that it was those who described themselves as convinced atheists who seemed to have more commitment to the work ethic than their

more religious peers.

Research into achievement orientation has linked the Protestant work ethic with religion, but very little research has been undertaken to compare religious with non-religious people. It would be expected from the research already undertaken that clergy in the protestant tradition should be orientated towards achieving.

### ***Hypothesis***

The link between religion and achievement orientation has been well established. Psychological theory has clearly shown a relationship between achievement orientation and work (Mirels & Garrett, 1971) The empirical evidence, however, suggests no clear consensus as to whether Protestants are more achievement orientated than any other religious denomination. The Christian Scriptures suggests a time for work and a time for rest. It would, however, be expected from the theoretical literature and the empirical literature that Protestant clergy would be more achievement orientated than those in the general population.

### ***Scale properties***

Table 9.13 reports on the reliability of the 20 item index of achievement orientation and gives the item rest of scale correlations. The achievement orientation scale achieved an alpha coefficient of .76 for males and .71 for females. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

Table 9.13 achievement orientation (ambitious/unambitious) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you have a strong desire for self-improvement?	0.3250	0.3195
Do you have any tendency towards laziness?	0.2642	0.2983
Do you pursue your work with relentless determination?	0.4172	0.3817
Do you work hard for success rather than daydream about it?	0.4463	0.2904
If you had to sit an examination during your school years did you do a great deal of preparation for it?	0.1526	0.1115
If you catch yourself being lazy do you try to do something about it immediately?	0.2961	0.1894
Do you try to do things immediately rather than put them off until later?	0.2853	0.2329
Do you strive very hard to get ahead?	0.5635	0.4848
Have you ever tried to model your career on that of a successful person?	0.2235	0.1865
Would you very much enjoy being in the 'public eye'?	0.2963	0.2590
Do you devote a great deal of energy toward making a creative contribution to society?	0.3107	0.3205
Do you have a strong desire to be an important person in the community?	0.3799	0.4043
Do you take an unusual amount of pride in your work?	0.3705	0.3908
Are you sometimes so excited by your work that thinking about it keeps you awake at night?	0.1813	0.1271
Do you prefer to mix with people who can help you socially or help your career?	0.1785	0.1200
Would you describe yourself as an ambitious person?	0.4959	0.4838
Do you get excited when you are telling someone else about the work you do?	0.2085	0.1084
Is achievement one of your primary values?	0.4496	0.3761
Do you find it difficult to enjoy a holiday because you would prefer to be back at work?	0.1319	0.1608
Is it extremely important to you to 'get on in the world'?	0.4379	0.4340
<b>Alpha</b>	<b>0.7577</b>	<b>0.7142</b>

*Interpreting the findings*

Table 9.14 presents the mean scale scores on the index of achievement orientation for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate that men in the general population scored significantly higher on the scale of achievement orientation than male clergy and that women in the general population scored significantly higher on the scale of achievement orientation than female clergy. There was, however, no significant difference between male and female clergy on the scale of achievement orientation.

Men in the general population scored significantly higher on the scale of achievement orientation than women in the general population. These data demonstrate that male and female clergy are less achievement orientated than men and women in the normal population and that there was no significant difference between male and female clergy.

Table 9.14 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	16.49	7.00	22.76	7.82
Female	16.24	6.17	21.03	8.01

Male clergy/female clergy,	t = 0.702	p< NS
Male clergy/male norms,	t = 17.837	p< .001
Female clergy/female norms,	t = 11.376	p< .001
Male norms/female norms	t = 4.080	p< .001

Table 9.15 penetrates behind the overall mean scores recorded on the index of achievement orientation to examine the percentage of male and female clergy who

endorse the individual items. The data demonstrate that over a fifth of male clergy have a strong desire to be an important person in the community (24%) and strive very hard to get ahead (21%).

Table 9.15 Percentage endorsement of the twenty item of the index of achievement orientation (ambitious/unambitious) for male and female clergy

	Male %	Female %
Do you have a strong desire for self-improvement?	65	62
Do you have any tendency towards laziness?	52	42
Do you pursue your work with relentless determination?	33	33
Do you work hard for success rather than daydream about it?	50	60
If you had to sit an examination during your school years did you do a great deal of preparation for it?	50	66
If you catch yourself being lazy do you try to do something about it immediately?	44	42
Do you try to do things immediately rather than put them off until later?	40	41
Do you strive very hard to get ahead?	21	19
Have you ever tried to model your career on that of a successful person?	15	7
Would you very much enjoy being in the 'public eye'?	26	17
Do you devote a great deal of energy toward making a creative contribution to society?	44	50
Do you have a strong desire to be an important person in the community?	24	16
Do you take an unusual amount of pride in your work?	35	38
Are you sometimes so excited by your work that thinking about it keeps you awake at night?	50	55
Do you prefer to mix with people who can help you socially or help your career?	6	4
Would you describe yourself as an ambitious person?	27	17
Do you get excited when you are telling someone else about the work you do?	60	75
Is achievement one of your primary values?	26	22
Do you find it difficult to enjoy a holiday because you would prefer to be back at work?	7	3
Is it extremely important to you to 'get on in the world'?	10	6

Over a quarter of male clergy say that achievement is one of their primary values (26%), would enjoy being in the 'public eye' (26%) and would describe themselves as an

ambitious person (27%). Under one in ten of male clergy prefer to mix with people who can help them socially or help them with their career (6%).

On the other hand, just under two-thirds of male clergy have a strong desire for self-improvement (65%). Around a half male clergy work hard for success rather than daydream about it (50%) and did a great deal of preparation for examinations during their childhood (50%). Over a third of male clergy take an unusual amount of pride in their work (35%).

The data demonstrate that under a fifth of female clergy have a strong desire to be an important person in the community (16%), would enjoy being in the 'public eye' (17%), would describe themselves as an ambitious person (17%) and strive very hard to get ahead (19%). Just over a fifth of female clergy say that achievement is one of their primary values (22%), and under one in twenty of female clergy prefer to mix with people who can help them socially or help them with their career (4%).

On the other hand, over three-fifths of female clergy have a strong desire for self-improvement (62%). Three fifths of female clergy work hard for success rather than daydream about it (60%) Around two thirds of female clergy did a great deal of preparation for examinations during their childhood (66%). Over a third of female clergy take an unusual amount of pride in their work (38%).

### ***Conclusions***

These data demonstrate that male and female clergy score significantly lower on the scale

of ambition than men and women in the normal population. It is, however, difficult to make comparisons with previous research because of the lack of research into achievement orientation among people claiming to have no religious affiliation. It might be expected, however that people in ministry would claim to have a faith and therefore be more achievement orientated than people in the normal population. This, however, is not borne out by the present research.

## **Dogmatism (dogmatic/flexible)**

### ***Definition***

The sixth construct proposed by the Eysenck Personality Profiler within the higher order dimension of extraversion is anchored by the opposite poles 'dogmatic' and 'flexible'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'dogmatism' and offer the following definition:

high scorers have set, uncompromising views on most matters, and they are likely to defend them vigorously and vociferously. Low scorers are less rigid and less likely to see things in black and white; they are open to rational persuasion and very tolerant of uncertainty.

The construct 'dogmatism' has long been of interest to psychologists and has given rise to a number of instruments that propose to measure dogmatism including, for example, the short form of the dogmatism scale (Troidahl & Powell, 1965), the religious dogmatism scale (Fagan & Breed, 1970), the opinion scale (Kleiber, Veldman & Menaker, 1973) and the index of religious dogmatism (Jelen & Wilcox, 1991).

## *Scripture and dogmatism*

In the Christian tradition there are two ways of understanding the relationship between dogmatism and Scripture. The first understanding suggests that religious commitment goes hand in hand with dogmatism. The New Testament portrays the Pharisees as exemplars of orthodox religiosity. There are many instances where the Pharisees condemn Jesus for flouting the Sabbath laws.

One Sabbath he was going through the cornfields; and as they made their way his disciples began to pluck heads of grain. The Pharisees said to him, 'Look, why are they doing what is not lawful on the Sabbath?' And he said to them, 'Have you never read what David did when he and his companions were hungry and in need of food? He entered the house of God, when Abiathar was high priest, and ate the bread of the Presence, which it is not lawful for any but the priests to eat, and he gave some to his companions.'

Then he said to them, 'The sabbath was made for humankind, and not humankind for the Sabbath' (Mark 2:23-27).

John the Baptist is also someone with a dogmatic personality

But when he (John) saw many Pharisees and Sadducees coming for baptism, he said to them, 'You brood of vipers! Who warned you to flee from the wrath to come? Bear fruit worthy of repentance. Do not presume to say to yourselves, 'We have Abraham as our ancestor:' for I tell you, God is able from these stones to raise up children to Abraham. Even now the axe is lying at the root of the trees; every tree therefore that does not bear good fruit is cut down and thrown into the fire (Matthew 3: 7-10).

The second understanding suggests that a Christian is not to be bound by the rules and regulations. In the New Testament there are many instances of Jesus telling people not to be bound to rules and suggests that the Pharisees be less rigid:

Again he entered the synagogue, and a man was there with a withered hand. They watched him to see whether he would cure him on the Sabbath, so that they might accuse him. And he said to the man who had the withered hand, 'come forward.' Then he said to them, 'Is it lawful to do good or harm on the Sabbath, to save life or to kill it?' But they were silent ( Mark 3: 1-4).

Then the Pharisees and scribes came to Jesus from Jerusalem and said, 'Why do your disciples break the tradition of the elders? For they do not wash their hands before they eat.' He answered them, 'And why do you break the commandment of God for the sake of your tradition? For God said, Honour your Father and your mother,' and , 'whoever speaks evil of father or mother must surely die.' But you say that whoever tells father or mother, Whatever support you might have had from me is given to God then the person need not honour the father. So, for the sake of your tradition, you make void the word of God (Matthew 15: 1-6).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between dogmatism and scripture.

### ***Psychological theory***

Psychologists of religion have over a number of years explored religion and the open and closed mind. One of the difficulties they encounter is the lack of a common understanding of what is meant by the closed mind. Some have interpreted the closed mind in terms of dogmatism (Kilpatrick, Sutker & Sutker 1970; Mangis 1995), whilst, others have explored such constructs as prejudice (Spilka & Reynolds 1965; Vanecko 1966; Hoge & Carroll 1973; Griffin, Gorsuch & Davis 1987; Billiet 1995), authoritarianism (Gregory 1957; Jones 1958; Weller, Levinbok, Maimon & Shaham 1975; Altemeyer & Hunsberger 1992; Hunsberger 1996), intolerance of ambiguity (Hassan & Khaliq 1981), fascism (Strickland & Shaffer 1971), conservatism (Weima 1965), discriminatory attitudes (Kirkpatrick 1993), and ethnocentrism (Gorsuch & Aleshire 1974; Eisinga, Felling & Peters 1990). It is important to distinguish dogmatism from these related constructs and it is important to recognize that the term 'dogmatism'

has itself been operationalised in a variety of different ways by different attempts to assess or measure this construct psychometrically. For example, the specially developed index of religious dogmatism employed in one recent study by Jelen and Wilcox (1991) may assess a rather different psychological construct from the established index of dogmatism employed in another recent study by Mangis (1995).

It was Rokeach (1960) who suggested a dimension of personality which he called 'dogmatism.' In his research individuals who scored high on his dogmatism scale were found to be rigid in their thinking, intolerant of ambiguity and unable to deal with new information. Rokeach (1960) found among American students that Roman Catholics had the highest dogmatism scores, followed by Protestants, while non-believers had the lowest scores. The aim of the empirical review is to concentrate on what may be established regarding the relationship between religion and dogmatism using the well established construct of dogmatism developed by Rokeach (1960) and assessed either by Rokeach's own editions of the Dogmatism Scale or the family of instruments derived from that scale, including the ten item short-form developed by Schulze (1962), the 20-item form developed by Troidahl and Powell (1965), the 50-item junior form developed by Figert (1968), the 40-item junior form developed by Dommert (1967), the 20-item junior form developed by Murray (1974).

### ***Empirical evidence***

Empirical studies concerning aspects of the relationship between Christianity and variants of the Rokeach dogmatism scale fall into seven main groups. The first group of studies

explores the relationship between dogmatism and Christian denomination. Rokeach (1960) postulated a relationship between dogmatism and denominational allegiance, hypothesising higher dogmatism scores among Catholics. His own empirical data provided conflicting evidence. A study among students in Michigan State University found higher dogmatism scores among Catholics than among Protestants. A similar study among students from two New York colleges found no significant difference in dogmatism scores between Catholics and Protestants. In subsequent studies Koeppe (1963) found higher dogmatism scores among Catholic social work students, compared with Protestants. Lengermann and D'Antonio (1974) found no difference in dogmatism scores between Protestant and Catholic community leaders in the USA. Similarly, Schlangen and Davidson (1985) found no significant differences in dogmatism scores between Catholic and Protestant churchgoers. In a study among students from Georgia and Loyola universities, Kilpatrick, Sutker and Sutker (1970) found higher dogmatism scores among Protestants than among Catholics.

In a rather different conceptualisation of denominational differences, Seaman, Michel and Dillehay (1971) classified Baptists, Church of Christ and Catholics together as 'high orthodoxy' Christians and found that students in this group recorded higher dogmatism scores than students who identified with other Christian denominations. Glass (1971) found Episcopalian students significantly less dogmatic than Baptist, Presbyterian, Methodist and Catholic students. Strickland and Weddell (1972) found Unitarians less dogmatic than Southern Baptists. Finally, the wide variation in dogmatism scores *within* denominations, rather than between denominations, is demonstrated by two studies, one

concentrating on Pentecostals (Gilmore, 1969) and one concentrating on Catholics (Hjelle & Lomastro 1971).

The second group of studies is also concerned with exploring levels of dogmatism within different religious groups, but this time the groups are defined in a variety of ways. Webster (1967) identified a geographical factor. in a study of students from Protestant seminaries in Australia, New Zealand, northern USA and southern USA, he found higher dogmatism scores in northern USA than in southern USA. Bohr (1968) identified different styles of religious orders and found a higher dogmatism score among sisters in a conservative order than among sisters in a liberal order. Hong (1966) identified different orientations to being Catholic and found higher dogmatism scores among Catholic students who adopt a moralistic approach to their faith than among Catholic students who adopt an intellectual approach to their faith.

The third group of studies compares Christian believers with unbelievers or with general population norms. Kania (1967) found that seminarians recorded higher dogmatism scores in comparison with the published norms. Feather (1967) found that students belonging to religious societies recorded higher dogmatism scores than student atheists. Poythress (1975) found higher dogmatism scores among religious believers than among sceptics when undergraduates were divided into two groups according to their profiles on the LAM scales (Hunt, 1972). In a sample of adults, Paloutzian, Jackson and Crandall (1978) found higher dogmatism scores among those who identified themselves as Christians than among the other respondents. In a second sample among students,

however, Paloutzian, Jackson and Crandall (1978) failed to replicate this finding. Cryns (1970) found higher dogmatism scores among Catholic seminarians and priests than among ex-seminarians and ex-priests.

The fourth group of studies takes a behavioural measure of religiosity and examines the correlation between dogmatism and church attendance. A positive relationship between dogmatism and frequency of church attendance has been reported in studies among professional Italian politicians (Di Renzo, 1967), students from Georgia University and Loyola University (Kilpatrick, Sutker and Sutker 1970), undergraduates from Ithara College (MacDonald 1970), psychology students (Steinger, Durso & Pasquariello 1972) and adult churchgoers (Strickland & Weddell 1972). On the other hand, no significant relationship between dogmatism and frequency of church attendance was found among adult participants at a seminar by Eckhardt and Newcombe (1969), among undergraduates by Primavera, Tantillo and DeLisio (1980), among high school pupils by Wilson (1985) or among adult church members by Schlangen and Davidson (1985). The factor analytic study undertaken by Wearing and Brown (1972) found church attendance and dogmatism to load on unrelated factors. Similarly, Kahoe and Dunn (1975) in a study among churchgoers found no relationship between dogmatism and 'regularity of various religious activities.'

The fifth group of studies explores the correlation between dogmatism scores and various indices of religiosity. Some of these studies reported a positive relationship. Stanley (1963a) found a positive correlation with a single item measure of fundamentalism

among students involved in Christian groups. Using the same measure of fundamentalism, Stanley (1963b 1964) also agreed with this finding among theological students from eight denominations. In a study among psychology students Feather (1964) found a positive correlation between dogmatism and a twenty-four item religious attitude test. Using the religious scale of the Allport, Vernon and Lindzey (1960) Study of Values, positive correlations were found among male college applicants by Plant, Telford and Thomas (1965) and among students entering five medical schools in the USA by Juan, Paiva, Haley and O'Keefe (1974). Swindell and L'Abate (1970) found a positive correlation with their two religiosity scales, the Religious Attitude Questionnaire and the Fundamentalist Attitude Inventory, among psychology students. Di Giuseppe (1971) found a positive correlation with his nine item scale assessing the importance of religion among students. Using Batson's (1976) Doctrinal Orthodoxy Scale, McNeel and Thorsen (1985) found a positive correlation between dogmatism and religion among students. Other studies, however, failed to find any correlation between dogmatism and measures of religiosity. Plant, Telford and Thomas (1965) found no relationship with the religious scale of the Study of Values among female college applicants. Meredith (1968), in a study among psychology students, found no relationship in a multiple regression model with either the Thurstone and Chave (1929) Attitude toward the Church Scale or the Ferguson (1944) Religionism Scale. In a study among psychology students Thalbourne, Dunbar and Delin (1995) found a positive correlation between dogmatism and the traditional religious belief index developed as a subscale of the Paranormal Belief Scale proposed by Tobacyk and Milford (1983). In a factor analytic study among university students, Wearing and Brown (1972) found religious belief and dogmatism loading

clearly on different factors. Moreover, a significant negative correlation was found between dogmatism and a thirty-item Likert type measure of conservative Christian beliefs in a study among high school pupils by Wilson (1985).

The sixth and most sophisticated group of studies is concerned with the correlation between dogmatism and different Christian orientations. Raschke (1973) employs the distinction drawn by Allen and Spilka (1967) between consensual and committed religiosity. Using his own measures of these dimensions he concludes that dogmatism is 'more positively associated with consensual religiosity than with committed religiosity', although no statistics are cited to support this claim. A larger number of studies employ the distinction between intrinsic and extrinsic religiosity, as developed by Allport and Ross (1967) and some include the quest orientation introduced by Batson and Ventis (1982). Even these studies, however, lead to no simple consensus, in part because of the variety of ways in which scores on the Religious Orientation Scales can be employed. In simple correlation studies both Kahoe (1974) among college students and Kahoe and Dunn (1975) among churchgoers found dogmatism to be correlated positively with extrinsic religiosity but was uncorrelated with intrinsic religiosity. In two separate samples of church members, Hoge and Carroll (1973) found dogmatism correlated positively with both extrinsic religiosity and intrinsic religiosity. In two samples of students both Paloutzian, Jackson and Crandall (1978) and McNeel and Thorsen (1985) found dogmatism to be independent of both extrinsic religiosity and intrinsic religiosity. On the other hand, in a sample of adults, Paloutzian, Jackson and Crandall (1978) found dogmatism to be independent of extrinsic religiosity, but positively correlated with

intrinsic religiosity. Using Wilson's (1960) extrinsic scale, Primavera, Tantillo and DeLisio (1980) found no correlation with dogmatism. Using the scale scores in a different way, Strickland and Weddell (1972) found intrinsic church members more dogmatic than extrinsic church members in a study among Unitarian and Southern Baptists. Thompson (1974) found both the indiscriminately anti-religious and the intrinsic religious to be more open-minded than the extrinsic religious or the indiscriminately pro-religious. This finding held good across their three separate analyses of Catholic adolescents, their mothers and their fathers. Finally, McNeel and Thorsen (1985) found a positive correlation between the quest orientation and dogmatism.

The seventh group of studies does not report directly on the relationship between dogmatism and religion, but employs the dogmatism scale as an explanatory variable in accounting for individual differences within Christian communities. Issues explored within this category include recognising religious symbols, words and pictures from one's own and a different religious tradition (Lo Sciuto & Hartley, 1963); orientation to liturgical change among Catholic laity (Di Renzo, 1967); attitudes toward religious change among Catholic laity (Apostal & Ditzler, 1971); self-concept change among ministers and missionaries (Fleck, McThomas, Nielsen & Shumaker, 1973); perception of mental health values among clergy (Langston, Privette & Vodanovich, 1994); and attitudes toward women (Mangis, 1995). In a similar way Richek, Mayo and Puryear (1970) examined the interaction between dogmatism and religiosity in promoting mental health, but did not examine the direct relationship between dogmatism and religion.

### ***Hypothesis***

This review makes it clear that there is no simple empirical consensus to support the popular claims that religious faith and the closed mind go hand in hand. The Christian Scriptures are clear that there two ways of understanding the relationship between dogmatim and faith. The psychological theory reveals that there is no consensus about what is meant by the closed mind. The empirical research also shows conflicting results (Rokeach, 1960). The main body of research, however, amongst believers and non-believers shows that those who hold a religious faith are more dogmatic and it clearly shows that those who are in Christian ministry have higher dogmatism scores. It is hypothesised that those in ministry will hold more dogmatic beliefs

### ***Scale properties***

Table 9.16 reports the reliability of the 20 item index of dogmatism and gives the item rest of scale correlations. The dogmatic scale achieved an alpha coefficient of .59 for the men and .54 for the women, which is below the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

Table 9.17 presents the mean scale scores on the index of dogmatism for male and female clergy separately and compares these scores with the norms provided in the test manual. The data demonstrate that male clergy recorded significantly higher scores on the index of dogmatism in comparison with the scores recorded by men in general. Females in the normal population record scores significantly higher on the index of dogmatism than

female clergy.

Table 9.16 Dogmatism (dogmatic/flexible) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you think it is dangerous to compromise with political opponents?	0.2334	0.1086
Would you prefer to be a dead hero than a live coward?	0.0893	0.1456
Are you appalled by the ignorance shown by the majority of people on social and political matters?	0.1950	0.1642
Does it annoy you when a supposed expert fails to come up with a definite solution to a social problem?	0.2268	0.2139
Do you get very angry when people stubbornly refuse to admit they are wrong?	0.2514	0.2542
Do you think it would be a good thing if everybody shared the same ideas and values?	0.2166	0.1236
Do you find it difficult to stop once you get involved in a heated discussion?	0.1986	0.2613
Do you think that other cultures have a lot to teach us about how to live?	0.1236	0.1169
Do you believe there is only one true religion?	0.2270	0.1986
Are you forthright and uncompromising in argument?	0.3331	0.3323
Do you determine nearly all of your conduct in relation to a single great cause?	0.2090	0.2415
Do you sometimes argue for the sake of argument, even when you know underneath that you are wrong?	0.1314	0.0297
Do you think it is often necessary to use force to advance an idea?	0.1617	0.0757
Do you attempt to convert others to your own point of view on matters of religion, morality and politics?	0.2080	0.2299
In the case of a disagreement do you try to put yourself in the Other person's position and try to understand their point of view?	0.1086	0.1009
Do you believe that the traditional and conventional ways of doing things are always the best?	0.1556	0.1452
Do you agree that most politicians talk a load of rubbish?	0.1657	0.1249
Once you have made up your mind about something do you stick to your decision whatever the consequences?	0.2306	0.1211
Do you have very clear ideas about what is right and wrong?	0.2361	0.2068
Do you find that your own way of attacking a problem always turns out to be the best in the long run?	0.1860	0.1688
Alpha	0.5862	0.5396

Moreover, in the population as a whole women record lower scores than men on the index of dogmatism while male clergy record higher scores than female clergy on the index of dogmatism. These data demonstrate that male clergy are more dogmatic than men in the normal population. Females in the normal population are more dogmatic than female clergy. Male clergy are also more dogmatic than female clergy

Table 9.17 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	15.88	5.43	15.02	5.61
Female	13.46	4.95	14.02	5.57

  

Male clergy/female clergy,	t = 8.680	p < .001
Male clergy/male norms,	t = 3.257	p < .001
Female clergy/female norms,	t = 1.822	p < .05
Male norms/female norms	t = 3.340	p < .001

### *Interpreting the findings*

Table 9.18 penetrates behind the overall mean scores recorded on the index of dogmatism to examine the percentages of male and female clergy who endorse the individual items. These data demonstrate that two-thirds or more of male clergy believe there is only one true religion (64%), attempt to convert others to their own point of view (68%) and have clear ideas about what is right or wrong (69%). Over a third of male clergy get very angry when people stubbornly refuse to admit they are wrong (44%), find it difficult to stop once they get involved in a heated discussion (46%), and sometimes argue for the sake of argument, even when they know underneath they are wrong (31%).

Table 9.18 Percentage endorsement of the twenty item of the index of dogmatism (dogmatic/flexible) for male and female clergy

	Male %	Female %
Do you think it is dangerous to compromise with political opponents?	18	19
Would you prefer to be a dead hero than a live coward?	32	27
Are you appalled by the ignorance shown by the majority of people on social and political matters?	38	30
Does it annoy you when a supposed expert fails to come up with a definite solution to a social problem?	27	23
Do you get very angry when people stubbornly refuse to admit they are wrong?	44	41
Do you think it would be a good thing if everybody shared the same ideas and values?	14	7
Do you find it difficult to stop once you get involved in a heated discussion?	46	37
Do you think that other cultures have a lot to teach us about how to live?	78	83
Do you believe there is only one true religion?	64	47
Are you forthright and uncompromising in argument?	26	20
Do you determine nearly all of your conduct in relation to a single great cause?	38	39
Do you sometimes argue for the sake of argument, even when you know underneath that you are wrong?	31	18
Do you think it is often necessary to use force to advance an idea?	9	2
Do you attempt to convert others to your own point of view on matters of religion, morality and politics?	68	50
In the case of a disagreement do you try to put yourself in the other person's position and try to understand their point of view?	81	88
Do you believe that the traditional and conventional ways of doing things are always the best?	8	2
Do you agree that most politicians talk a load of rubbish?	45	38
Once you have made up your mind about something do you stick to your decision whatever the consequences?	23	23
Do you have very clear ideas about what is right and wrong?	69	66
Do you find that your own way of attacking a problem always turns out to be the best in the long run?	20	18

Around four-fifths of male clergy in a disagreement try to put themselves in the other person's position and try to understand their point of view (81%) and think that other

cultures have a lot to teach us (78%). Only just over a quarter claim to be forthright and uncompromising in arguments (26%) and only a fifth claim that their own way of attacking a problem always turns out to be the best in the long run (20%).

These data also demonstrate that two-thirds or more of female clergy have clear ideas about what is right or wrong (66%) and two-fifths or more believe there is only one true religion (47%), attempt to convert others to their own point of view on matters of religion, morality and politics (50%) and get very angry when people stubbornly refuse to admit they are wrong (41%).

Over four-fifths of female clergy in a disagreement try to put themselves in the other persons position and try to understand their point of view (88%) and think that other cultures have a lot to teach us (83%). Only a fifth of female clergy claim to be forthright and uncompromising in arguments (20%) and only a fifth claim that their own way of attacking a problem always turns out to be the best in the long run (18%).

### ***Conclusions***

These data demonstrate that male clergy score significantly higher on the scale of dogmatism than the men in the normal population. This is reversed for the women as women in the normal population score significantly higher on the index of dogmatism than female clergy when using the Eysenck Personality Profiler. The fact that male clergy are more dogmatic supports previous research when using Rokeach's (1960) Dogmatism Scale among seminarians (Kania, 1967) and among priests and seminarians (Cryns,

1970). It also supports some of the wider body of research on religion and dogmatism.

## **Aggressiveness (aggressive/peaceful)**

### ***Definition***

The seventh construct proposed by the Eysenck Personality Profiler within the higher order factor of extraversion is anchored by the two opposite poles 'aggressive' and 'peaceful'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'aggressiveness' and offer the following definition:

high scorers on the aggressiveness sub-factor are given to the direct or indirect expression of aggression, for example through behaviours such as temper tantrums, fighting, violent argument and sarcasm. They take no nonsense from anyone and feel compelled to return fire or 'get back' at anyone who transgresses against them. Low scorers are gentle, even-tempered, prefer to avoid personal conflict, and are not given to violence either physical or indirect.

The construct 'aggression' has long been of interest to psychologists and aggression in personality theory and has been traced through an evolutionary perspective (Buss, 1997). Buss (1997) claims that aggression, in terms of attacking or threatening others was dominant in primate personality traits and that through evolution these trends continued into the human evolutionary process and consequently personality theorists choose to include it in their personality scales. A number of personality scales do in fact include aggression in one form or another including, for example, Guilford (1934) who includes it in his OAgCO scale and asks questions about aggressive tendencies when provoked. Cattell, Eber and Tatsuoka (1970) include it in their scales with questions about degree of emotional arousal evoked by different events. Aggression is also to be found in the

Minnesota Multiphasic Personality Inventory (Hathaway & Mckinley, 1951) and in the Edwards Personality Preference scale (Edwards, 1959).

### ***Scripture and aggressiveness***

In the Christian tradition there are two different ways of understanding the relationship between aggressiveness and Scripture. The first understanding is one which suggests that religious people should be aggressive. Within the Biblical tradition there are many instances where aggression is seen as a positive emotion. In the New Testament there are instances when Jesus displays characteristics associated with aggression:

Do not think that I have come to bring peace to the earth: I have come not to bring peace but a sword. For I have come to set a man against his father, and a daughter against her mother and a daughter-in-law against her mother-in-law; and one's foes will be members of one's own household (Matthew 10: 34-36).

In the temple he found people selling cattle, sheep, and doves, and the moneychangers seated at their tables. Making a whip of cords, he drove all of them out of the temple, both the sheep and the cattle. He also poured out the coins of the moneychangers and overturned the tables. He told those who were selling the doves, 'Take these things out of here! Stop making my Father's house a market place!' His disciples remembered that it was written, 'Zeal for your house will consume me.' (John 2: 14-17)

The second understanding suggests peace and not aggression. There are the instances where Jesus encourages people who put their faith in God not to engage in aggressive activities but 'turn the other cheek'

You have heard that it was said, 'An eye for an eye and a tooth for a tooth.' But I say to you, Do not resist an evildoer. But if anyone strikes you on the right cheek, turn the other also: and if anyone wants to sue you and take your coat, give your cloak as well; and if anyone forces you to go one mile, go also the second (Matthew 5 38-41).

Suddenly, one of those with Jesus put his and on his sword, drew it, and struck the slave of the high priest, cutting off his ear. Then Jesus said to him, 'Put your sword back into its place; for all who take the sword will perish by the sword (Matthew 26: 51-52).

Depending on which of these two scriptural perspectives predominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between aggression and scripture.

### ***Psychological theory***

Searches have identified few studies in the psychology of religion which have specifically drawn on the construct aggressiveness. What studies there are in the area of aggression and religion has focused mainly on those involved in some form of ministry.

### ***Empirical Evidence***

Strunk (1959) administered the Strong Vocational Interest Blank for Men (Strong, 1938-1959) and the Bell Adjustment Inventory (Bell, 1934) to 60 pre-ministerial students ranging in age from 17 to 22 and to 50 business administration students. The results showed that pre-ministerial students scored higher and showed more aggressiveness in social contacts than the business students ( $p < .01$ ).

Quello (1970) administered the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway & McKinley, 1951) and the Edwards Personal Preference Schedule (EPPS, Edwards, 1959) to two groups of theological students. Each group consisted of 25 students, one group was enrolled in a one-year program of clinical pastoral education and

there was a matched group of 25 male theological students engaged in theological studies but not intent upon a subsequent year of clinical education. The results show no significant difference between the two groups on the scale of aggression.

Pino (1980) administered the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway & McKinley, 1951) and the Edwards Personal Preference Schedule (EPPS, Edwards, 1959) to assess personality change among seminarians during the 1970s. The sample consisted of 20 Roman Catholic seminarians from the incoming class of 1970 and 20 Roman Catholic seminarians from the incoming class of 1976. The results reveal that the incoming class of 1970 scored significantly lower scores on the scale of aggression than the incoming class of 1976 ( $p < .05$ ).

Patrick (1991) administered the Edwards Personal Preference Schedule (EPPS, Edwards, 1959) and the Minnesota Multiphasic Personality Inventory (MMPI, Hathaway & McKinley, 1951) to a sample of 67 male and female United Church of Christ pastoral candidates in order to assess their personality characteristics. The results show that male and female United Church candidates had lower scores on the Edwards Personal Preference Schedule, scale of aggression than the normal population.

Thorson (1992) makes a comparison between three studies that have used the Edwards Personal Preference Schedule (EPPS, Edwards, 1959). These studies include Patrick (1991), Edwards (1959) and Thorson and Powell (1988, 1991). The results show that male pastoral candidates score significantly lower on the aggression scale than college

norms ( $p < .01$ ) and medical students ( $p < .01$ ). Female pastoral candidates on the other hand, scored significantly lower on the aggression scale than college norms ( $p < .01$ ) and medical students ( $p < .01$ ).

Tennison and Snyder (1968) investigated attitudes to the church and certain personality characteristics among 299 college students. The Thurstone and Chave Scale for measuring attitudes to the church (Thurstone & Chave, 1929) and the Kilpatrick Religiosity Scale (Kilpatrick, 1949) were used to assess varying degrees of favourable attitudes toward the church. The Minnesota Multiphasic Personality Inventory (MMPI, Hathaway & McKinley, 1951) was used to assess the psychological needs of the students. The results show a negative correlation between the Edwards Personal Preference Schedule variable aggression and the mean religiosity index ( $p < .01$ ). Religious people therefore tend to be less aggressive.

### ***Hypothesis***

The link between religion and aggression is mixed. The Christian scriptures suggest that there are occasions when aggression and peaceful behaviour is necessary. There is, however, no psychological theory relating religion and aggression. The empirical evidence gives no consistent view as to whether those in ministry would be more or less aggressive than those in the normal population. Three of the reports, however, suggest that religious people were less aggressive and one suggests that there is no significant difference between religious people and the normal population. It is hypothesised on the basis of these results that religious people especially those in ministry would be less

aggressive.

Table 9.19 Aggressiveness (aggressive/peaceful) reliability analysis

	Item rest of scale correlation	
	Male	Female
Would you hesitate to shoot a burglar who was escaping with some of your property?	0.1390	0.1544
Are you considered an even-tempered person?	0.3027	0.3390
Do you often make biting or sarcastic remarks about other people?	0.2426	0.3117
Are there times when you feel as though you would like to pick a fight with somebody?	0.3689	0.3063
If someone tells lies about you do you feel obliged to do something about it?	0.0560	0.0161
Have you ever felt so angry that you would like to kill somebody?	0.3087	0.2286
Are you usually able to refrain from expressing your irritation?	0.2785	0.3253
Do you enjoy scenes of gladiators fighting in the movies?	0.2160	0.0031
Would you like to watch an execution if you were given the opportunity?	0.2172	0.1064
Do you think that most pacifists are just cowards?	0.0810	0.0295
Do you often blame other people when something goes wrong?	0.2226	0.1474
Did you stay out of physical fights when you were a child?	0.0609	0.1625
Do you like to play at ducking people when you are having a swim?	0.1312	-0.0463
Do you sometimes get so annoyed that you break crockery or throw things around the house?	0.2727	0.2795
Can you usually manage to be patient even with fools?	0.2213	0.2346
Do you get very angry when you read what certain politicians have said in the newspaper?	0.1519	0.1599
Do you like to watch boxing or wrestling matches on television?	0.1495	0.0468
When you get very angry do you do a lot of physical things like stamping your feet and kicking things?	0.2885	0.3296
Do you ever get so angry with other people that you shout and swear at them?	0.2966	0.2927
If somebody annoys you do you usually tell them what you think in no uncertain terms?	0.2243	0.2787
Alpha	0.6068	0.5795

### ***Scale Properties***

Table 9.19 reports on the reliability of the 20 item index of aggressiveness and gives the item rest of scale correlations. The aggressive scale achieved an alpha coefficient of .61 for males and .58 for females. Both alpha coefficients are below the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the findings***

Table 9.20 presents the mean scale scores on the index of aggressiveness for male and female clergy separately and compares the scores with the norms provided in the test manual. These data demonstrate that men in the normal population score significantly higher on the scale of aggressiveness than male clergy and that women in the normal population score significantly higher on the scale of aggressiveness than female clergy. Male clergy score higher on the scale of aggressiveness than female clergy and men in the normal population also score significantly higher on the scale of aggressiveness than women in the normal population. These data demonstrate that male and female clergy are less aggressive than people in the general population and that male clergy score higher on the scale of aggressiveness than female clergy.

Table 9.21 penetrates behind the overall mean scores recorded on the index of aggressiveness to examine the percentage of male and female clergy who endorse the individual items. These data demonstrate that around a third of male clergy often make biting or sarcastic remarks about other people (32%) and feel that there are times when they feel they would like to pick a fight with somebody (30%). Just over a half of male

clergy feel obliged to do something about someone telling lies about them (53%) and get very angry when they read what certain politicians have said in the newspaper (54%).

Table 9.20 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	9.61	5.06	14.22	6.73
Female	7.02	4.24	12.00	6.36

  

Male clergy/female clergy,	t = 10.189	p < .001
Male clergy/male norms,	t = 16.702	p < .001
Female clergy/female norms,	t = 15.506	p < .001
Male norms/female norms	t = 6.330	p < .001

On the other hand, over four-fifths of male clergy would hesitate to shoot a burglar who was escaping with some of their property (85%) and are considered as an even-tempered person (84%). Two-thirds of male clergy managed to stay out of physical fights when they were in school (66%) and seven in ten male clergy are usually able to refrain from expressing their irritation (70%) and can usually manage to be patient even with fools (72%).

Overall female clergy are less aggressive than male clergy and under a fifth of female clergy often make biting or sarcastic remarks about other people (15%). Just under a half of female clergy feel obliged to do something about someone telling lies about them (49%) and get very angry when they read what certain politicians have said in the newspaper (52%).

Table 9.21 Percentage endorsement of the twenty items of the index of aggressiveness (aggressive/peaceful) for male and female clergy

	Male %	Female %
Would you hesitate to shoot a burglar who was escaping with some of your property?	85	91
Are you considered an even-tempered person?	84	82
Do you often make biting or sarcastic remarks about other people?	32	15
Are there times when you feel as though you would like to pick a fight with somebody?	30	28
If someone tells lies about you do you feel obliged to do something about it?	53	49
Have you ever felt so angry that you would like to kill somebody?	14	14
Are you usually able to refrain from expressing your irritation?	70	73
Do you enjoy scenes of gladiators fighting in the movies?	20	2
Would you like to watch an execution if you were given the opportunity?	4	0
Do you think that most pacifists are just cowards?	2	1
Do you often blame other people when something goes wrong?	17	12
Did you stay out of physical fights when you were a child?	66	74
Do you like to play at ducking people when you are having a swim?	14	3
Do you sometimes get so annoyed that you break crockery or throw things around the house?	11	11
Can you usually manage to be patient even with fools?	72	77
Do you get very angry when you read what certain politicians have said in the newspaper?	54	52
Do you like to watch boxing or wrestling matches on television?	23	4
When you get very angry do you do a lot of physical things like stamping your feet and kicking things?	19	14
Do you ever get so angry with other people that you shout and swear at them?	17	14
If somebody annoys you do you usually tell them what you think in no uncertain terms?	6	4

On the other hand, nine out of ten female clergy would hesitate to shoot a burglar who was escaping with some of their property (91%) and just over four-fifths are considered as an even-tempered person (82%). Almost three-quarters of female clergy managed to

stay out of physical fights when they were in school (74%) and are usually able to refrain from expressing their irritation (73%) and over three-quarters of female clergy can usually manage to be patient even with fools (77%).

### ***Conclusions***

These data demonstrate that male and female clergy score significantly lower on the Eysenck Personality Profiler aggression scale than men and women in the normal population. This finding is consistent with previous research into personality and students in training for ministry (Pino, 1980; Patrick, 1991; Thorson, 1992).

### **Summary**

The higher order dimension of extraversion in the Eysenck Personality Profiler is made up of seven constructs: activity (active/inactive), sociability (sociable/unsociable), expressiveness (expressive/inhibited), assertiveness (assertive/submissive), achievement orientation (ambitious/unambitious), dogmatism (dogmatic/flexible), aggressiveness (aggressive/peaceful). The overall results reveal that in six out of the seven scales the male clergy record significantly lower scores than men in the normal population. The only index on which they score higher is the index of dogmatic/flexible. These data demonstrate that male clergy are more introverted than men in the general population and this finding is supported by previous research using Eysenck's model of the three higher order factors of extraversion, neuroticism and psychoticism (Francis, 1991; Jones & Francis 1992, Loudon & Francis 1999).

Female clergy in comparison to the normal population also score significantly lower on six out of the seven scales making up the higher order dimension of extraversion. The only index in which there is no significant difference between female clergy and the normal population is dogmatic/flexible. This finding, that female clergy are more introverted than the population norms is contrary to the research of Francis (1991) who found that women in training for ministry had significantly higher extraversion scores than women in the normal population.

These data also demonstrate that male clergy score significantly higher than female clergy on five out of the seven scales making up the higher order dimension of extraversion. There is no significant difference between male and female clergy on the active/inactive and ambitious/unambitious indexes. This finding that female clergy are more introverted than male clergy is not supported by previous research. Francis (1992) found that women clergy were more extraverted than male clergy and Robbins, Francis and Rutledge (1997) found no significant difference between male and female clergy on the higher order dimension of extraversion.

The overall picture reveals clergy as people who are inclined to be physically inactive, lethargic and easily tired. Who move about at a leisurely pace and prefer quiet restful holidays. They are people who prefer to have only a few special friends, enjoy solo activities such as reading, they have difficulty in finding things to talk about to other people, and are inclined to withdraw from oppressive social contacts. The clergy present themselves to the world as reserved, even tempered, cool, detached and generally

controlled as regards the expression of their thoughts and feelings. They appear humble, timid, submissive and people who are disinclined to take any initiatives in an interpersonal situation and may be easily imposed upon. They are people who place little value on competitive performance or creative output. Some may appear apathetic, retiring and aimless. Others may be seen as gentle, even-tempered, people who prefer to avoid personal conflict, and violence. The male clergy in particular may be seen as rigid, having uncompromising views and as a group of people who are likely to defend their views vigorously.

# 10. Seven Aspects of Psychoticism

## Overview

This chapter will investigate the higher order dimension of psychoticism and its seven component parts. The seven component parts that make up the higher order dimension of psychoticism are:

- Risk-taking (risk-taking/careful)
- Impulsiveness (impulsive/controlled)
- Irresponsibility (irresponsible/responsible)
- Manipulation (manipulation/empathy)
- Sensation Seeking (sensation seeking/unadventurous)
- Masculinity-Femininity (toug minded/tender minded)
- Unreflectiveness (practical/reflective)

This chapter will be subdivided into the seven component parts that make up the higher order factor of psychoticism. Each of the component parts will be explored under eight sections. The first section gives the definition of the component part as defined by Eysenck and Wilson (1976). The second section investigates the relationship between scripture and the component part. The third section explores the psychological theory of the component part. Section four gives examples of empirical research already

undertaken in relation to the component part and the psychology of religion. The fifth section uses the findings of the previous sections to make a hypothesis on which to test the present data. Section six, investigates the scale properties of the component part. Section seven gives an interpretation of the findings. Finally section eight sets about making a conclusion.

The quantity of empirical research available for each component part varies greatly between one component part and another component part. This is due largely to the fact that some of the component parts have been researched more fully than others in the psychology of religion. The intention of including previous empirical research is to get a feel for what has already been done in that area of the psychology of religion and not to give a comprehensive review.

In section seven, interpreting the findings, comparisons will be made between male clergy and female clergy, between male clergy and the population norms for men in general and between female clergy and the population norms for women in general. Normative data for the 21 scales of the Eysenck Personality Profiler have been calculated by Eysenck, Wilson and Jackson (1999) on the basis of the responses of 697 men and 697 women.

## **Risk-taking (risk-taking/careful)**

### ***Definition***

The first construct proposed by the Eysenck Personality Profiler within the higher order

dimension of psychoticism is anchored by the opposite poles 'risk-taking' and 'careful'. In their original formulation Eysenck and Wilson (1976) describe this construct as risk taking and offer the following definition:

high scorers on the risk taking sub factor like to live dangerously and seek rewards with little concern for the possible adverse consequences. Characteristically, they are gamblers who believe that 'an element of risk adds spice to life.' Low scores indicate a preference for familiarity, safety and security, even if this means sacrificing some degree of excitement in life.

Psychologists have found that in general females perceive greater risk in virtually all aspects of life, and are as a consequence less likely to have risk taking attitudes and to be involved in risk taking behaviours (Hagan, Simpson & Gillis, 1988; Keane, Gillis & Hagan, 1989).

When considering physical forms of risk taking, males are clearly greater risk takers and have greater risk preferences regardless of other factors such as age or race (Ginsburg & Miller, 1982; Veevers & Geeves, 1986; Zuckerman, Ball & Black, 1990).

The most common sociological explanation for gender differences in risk taking is the socialization processes. Risk taking is seen as a masculine characteristic that emphasises courage and adventurousness. While females are socialised to be more passive and gentle (Veevers & Gee, 1986).

The construct 'risk taking' has mainly been investigated as a consequence of other research into personality, and is included in, for example scales like Cattells 16PF

(Cattell, Eber, & Tatsuoka, 1970). Another inventory that contains the aspect of risk-taking is the Eysenck Impulsiveness Inventory Form I<sub>6</sub> (Eysenck, Easting & Pearson, 1984).

### ***Scripture and risk-taking***

In the Christian tradition there are two ways of understanding the relationship between risk-taking and scripture. The first understanding is one which encourages people to take risks the disciples for example risked their business and livelihood to follow Christ:

‘Again I tell you, it is easier for a camel to go through the eye of a needle than for someone who is rich to enter the kingdom of God.’ When the disciples heard this, they were greatly astounded and said, ‘Then who can be saved?’ But Jesus looked at them and said, ‘For mortals it is impossible, but for God all things are possible.’ Then Peter said in reply, ‘Look, we have left everything and followed you. What then will we have?’ Jesus said to them, ‘Truly I tell you, at the renewal of all things, when the Son of Man is seated on the throne of his glory, you who have followed me will also sit on twelve thrones, judging the twelve tribes of Israel (Matthew 19: 24 - 28).

There is also the example of Mary the mother of Jesus who risked all that she had in order to fulfil the word of God:

In the sixth month the angel Gabriel was sent by God to a town in Galilee called Nazareth, to a virgin engaged to a man whose name was Joseph, of the house of David. The virgin’s name was Mary. And he came to her and said, ‘Greetings, favoured one! The Lord is with you.’ But she was much perplexed by his words and pondered what sort of greeting this might be. The angel said to her, ‘Do not be afraid, Mary, for you have found favour with God. And now, you will conceive in your womb and bear a son, and you will name him Jesus. He will be great, and will be called the Son of the Most High, and the Lord God will give to him the throne of his ancestor David. He will reign over the house of Jacob forever, and of his kingdom there will be no end.’ Mary said to the angel, ‘How can this be, since I am a virgin?’ The angel said to her, ‘The Holy Spirit will come upon you, and the power of the Most High will overshadow you; therefore the child to be born will be holy; he will be called Son of God. And now, your relative Elizabeth in her old age has also conceived a son; and this is the sixth month for her

who was said to be barren. For nothing will be impossible with God.' Then Mary said, 'Here am I, the servant of the Lord; let it be with me according to your word.' Then the angel departed from her (Luke 1: 26-38).

The second understanding encourages stability, safety and security. The parable of the prodigal son shows the safe, secure older son who chooses to stay in the familiar environment of his home rather than leave like his younger brother:

Now his elder son was in the field; and when he came and approached the house, he heard music and dancing. He called one of the slaves and asked what was going on. He replied, 'Your brother has come, and your father has killed the fatted calf, because he has got him back safe and sound.' Then he became angry and refused to go in. His father came out and began to plead with him. But he answered his father, 'Listen! For all these years I have been working like a slave for you, and I have never disobeyed your command; yet you have never given me even a young goat so that I might celebrate with my friends. But when this son of yours came back, who has devoured your property with prostitutes, you killed the fatted calf for him!' Then the father said to him, 'Son, you are always with me, and all that is mine is yours. But we had to celebrate and rejoice, because this brother of yours was dead and has come to life; he was lost and has been found' (Luke 15: 25 - 32).

Then there is also the example of Simeon and Anna two devout people waiting on God who are rewarded by God for their safe, secure and familiar patterns of faith:

Now there was a man in Jerusalem whose name was Simeon; this man was righteous and devout, looking forward to the consolation of Israel, and the Holy Spirit rested on him. It had been revealed to him by the Holy Spirit that he would not see death before he had seen the Lord's Messiah. Guided by the Spirit, Simeon came into the temple; and when the parents brought in the child Jesus, to do for him what was customary under the law, Simeon took him in his arms and praised God, saying, 'Master, now you are dismissing your servant in peace, according to your word; for my eyes have seen your salvation, which you have prepared in the presence of all peoples, a light for revelation to the Gentiles and for glory to your people Israel.' And the child's father and mother were amazed at what was being said about him. Then Simeon blessed them and said to his mother Mary, 'This child is destined for the falling and the rising of many in Israel, and to be a sign that will be opposed so that the inner thoughts of many will be

revealed and a sword will pierce your own soul too.' There was also a prophet, Anna the daughter of Phanuel, of the tribe of Asher. She was of a great age, having lived with her husband seven years after her marriage, then as a widow to the age of eighty-four. She never left the temple but worshiped there with fasting and prayer night and day. At that moment she came, and began to praise God and to speak about the child to all who were looking for the redemption of Jerusalem (Luke 2 25-38).

Depending on which of these two scriptural perspectives dominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and risk-taking.

### ***Psychological theory***

Malinowski (1925) was one of the first psychologists of religion to construct a theory around risk-taking and religion. He claimed that religiosity is related to a desire to control those things that cannot be controlled which he believed ultimately involved a way of dealing with fear of death. A risk-averse person is more likely than a risk taker to deal with uncertainties and fears in a culturally appropriate way, through for example participation in religion. Several studies have shown that in general, risk-averse people prefer traditional ways of handling stressful and uncertain situations, while risk-takers are more likely to look for innovative responses (Holloway, 1979; Ferguson & Valenti, 1991).

Stark and Bainbridge (1985; 1987) suggest that individual religiosity involves a decision-making process where rewards and costs are considered rationally. They argue that religiosity increases when people actively seek the rewards religion provides. This approach is very similar to basic risk analysis approaches. Rewards and costs are affected

greatly by the perceived risks involved in any decision. For example, the perceived risk of not belonging to an institution that provides a moral education is likely to increase when a person has children. Thus one reward associated with church membership is likely to increase when a couple has children. Similarly, studies have shown consistently that religiosity increases with age, as people get older they become more aware of their own mortality and consequently the risk associated with a lack of religious commitment increases.

Finke and Stark (1992) also suggested that people contemplating religious participation weigh rationally the rewards promised by religious allegiance against the costs and risks involved.

Psychological theory has also found that women are more risk-averse than men and that women are more religious than men. As a result of this psychological theory it would be expected that, in general, risk-averse people are more religious than risk takers and that risk-averse males will be more religious than risk-taking males, and that risk-averse females will be more religious than risk-taking females (Miller & Hoffmann, 1995).

### ***Empirical evidence***

Miller and Hoffmann (1995) using data from 2,408 high school seniors investigated the relationship between risk taking and gender in relation to religion. Risk preferences were measured with two questions about risk and danger. Religiosity was measured by church

attendance and the importance of religion to the individual. The results show that risk preference for both males and females is negatively correlated to religion ( $p < .001$ ).

Chalmers (1969) administered Cattell's personality scale the 16 PF (Cattell, 1957) to 114 active Seventh day Adventist ministers in the United States of America. The results showed that these ministers scored higher on risk-taking which is part of the factor H scale than men in general.

Pallone and Banks (1968) administered Cattell's personality scale the 16PF (Cattell, 1957) to 21 Seventh-day Adventists from a seminary in North America. The results showed that these seminarians scored higher on risk-taking which is part of the factor H scale, than men in general.

Nauss (1972b) administered the 16PF to 242 graduating seminarians from Springfield, Illinois. The results showed that these ministers scored higher on risk-taking which is part of the factor H scale, than men in general.

Pearson, Francis and Lightbown (1986) administered the Eysenck Impulsiveness Inventory Form I<sub>6</sub> (Eysenck, Easting & Pearson, 1984) and the ASC4B (Francis, 1978) to a sample consisting of 279 boys and 290 girls in order to investigate the relationship between religiosity and different dimensions of personality. The results showed an inverse relationship between risk-taking and religion ( $p < .001$ ).

Godwin (1990) administered Cattell's personality scale the 16PF (Cattell, 1957) to 252 new staff applicants for the Campus Crusade for Christ in the United States of America. The results showed that these applicants scored higher on risk taking, which is part of the factor H scale, than men in general.

Stewart (1990) administered Cattell's personality scale the 16PF (Cattell, 1957) to 54 protestant ministers in the USA. The results showed that these applicants scored higher on risk taking which is part of the factor H scale, than men in general.

### ***Hypothesis***

The link between risk-taking and religion is clear. Religious people are more risk-averse than those in the normal population. The Christian scriptures suggest that risk-taking is important as well as stability, safety and security. The psychological theory is clear that there is a relationship between risk-taking and religion. The empirical research has suggested a relationship between religion and risk-taking. From the evidence presented it can be hypothesised that people in ministry will score lower on risk-taking than people in the normal population and that men will score higher than women.

### ***Scale Properties***

Table 10.1 reports the reliability of the 20 item index of risk-taking and gives the item rest of scale correlations. The risk-taking scale achieved an alpha coefficient of .72 for the male clergy and .65 for the female clergy. The male clergy score an alpha coefficient

that is above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument but the score for the female clergy was below the .70 marker.

Table 10.1 Risk-taking (risk-taking/careful) reliability analysis

	Item rest of scale correlation	
	Male	Female
When buying things, do you usually examine the guarantee?	0.1802	0.0533
Do you arrive at appointments with plenty of time to spare?	0.2526	0.2136
Would being in debt worry you?	0.2515	0.2241
Would you make quite sure you had another job before giving up your old one?	0.2715	0.0762
Would life with no danger in it be too dull for you?	0.3519	0.3309
Do you find that you have often crossed a road leaving your more careful companions on the other side?	0.2990	0.2643
Would you enjoy fast driving?	0.3141	0.3911
Do you avoid adventurous rides such as roller-coasters and ferris wheels when at an amusement park?	0.2717	0.1826
Do you always wear a safety belt when travelling in a car?	0.3069	0.2610
When you are catching a train, do you often arrive at the last minute?	0.2753	0.2194
When the odds are against you, do you still usually think it worth taking a chance?	0.2821	0.2963
Do you quite enjoy taking risks?	0.5212	0.5297
When travelling in an aeroplane, bus or train, do you choose a seat with safety in mind?	0.1357	0.1036
Are you careful to swim between the lifesaver's flags at the beach?	0.3385	0.1626
Do you lock up your house carefully at night?	0.2661	0.1700
Do you save regularly?	0.1356	0.1657
Would you do almost anything just to show other people or even yourself that you could do it?	0.2219	0.2391
Would you always be careful to declare everything at the customs if you had travelled abroad?	0.2717	0.1794
Would you prefer a job involving change, travel and variety even though it was risky and insecure?	0.4308	0.4102
Do people who drive carefully annoy you?	0.3237	0.2647
Alpha	0.7198	0.6527

### *Interpreting the Findings*

Table 10.2 presents the mean scale scores on the index of risk-taking for male and female clergy separately and compares the scores with the norms provided in the test manual. These data demonstrate that men in the normal population record significantly higher scores on levels of risk than male clergy and that females in the normal population record significantly higher scores on levels of risk than female clergy. Male clergy record significantly higher scores on levels of risk than female clergy and men in the general population record significantly higher scores on levels of risk than females in the general population.

In summary, these data reveal men and women in the normal population are higher risk-takers than male and female clergy and that male clergy are greater risk-takers than female clergy.

Table 10.2 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	16.81	6.73	21.81	6.70
Female	14.26	5.95	20.18	6.66

  

Male clergy/female clergy,	t = 7.441	p < .001
Male clergy/male norms,	t = 15.498	p < .001
Female clergy/female norms,	t = 16.076	p < .001
Male norms/female norms	t = 4.555	p < .001

Table 10.3 penetrates behind the overall mean scores recorded on the index of risk-taking to examine the percentage of male and female clergy who endorse the individual items. These data demonstrate that four-fifths of male clergy would worry if they were in debt

(80%) and well over four fifths of male clergy always wear their seatbelts (86%). Three-quarters of male clergy lock up their house carefully every night (75%). Around two-thirds of male clergy are always careful to declare everything at customs if they have travelled abroad (69%) and would make sure they had another job before giving up the old one (65%). Over half of male clergy save regularly (54%).

On the other hand, around three-fifths of male clergy enjoy fast driving (63%) and when the odds are against them think its still worth taking a chance (60%). Just over a half find that they have often crossed the road leaving their more careful companions behind (53%) and just over two-fifths of male clergy find that life with no danger would be too dull for them (42%)

Table 10.3 Percentage endorsement of the twenty item of the index of risk-taking (risk-taking/careful) for male and female clergy

	Male %	Female %
When buying things, do you usually examine the guarantee?	29	25
Do you arrive at appointments with plenty of time to spare?	62	60
Would being in debt worry you?	80	87
Would you make quite sure you had another job before giving up your old one?	65	52
Would life with no danger in it be too dull for you?	42	33
Do you find that you have often crossed a road leaving your more careful companions on the other side?	53	34
Would you enjoy fast driving?	63	43
Do you avoid adventurous rides such as roller-coasters and ferris wheels when at an amusement park?	48	69
Do you always wear a safety belt when travelling in a car?	86	90
When you are catching a train, do you often arrive at the last minute?	21	19
When the odds are against you, do you still usually think it worth taking a chance?	60	51
Do you quite enjoy taking risks?	45	34
When travelling in an aeroplane, bus or train, do you choose a seat with safety in mind?	11	13

Are you careful to swim between the lifesaver's flags at the beach?	62	78
Do you lock up your house carefully at night?	75	76
Do you save regularly?	54	52
Would you do almost anything just to show other people or even yourself that you could do it?	16	13
Would you always be careful to declare everything at the customs if you had travelled abroad?	69	76
Would you prefer a job involving change, travel and variety even though it was risky and insecure?	32	25
Do people who drive carefully annoy you?	22	14

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These data also demonstrate that well over four-fifths of female clergy would worry if they were in debt (87%) and always wear their seatbelts (90%). Three-quarters and more of female clergy are careful to swim between the lifesaver's flags on the beach (78%) and are always careful to declare everything at customs if they have travelled abroad (76%) lock up their house carefully every night (76%). Over two-thirds of female clergy avoid adventurous rides such as roller-coasters (69%). Over half of female clergy save regularly (52%) and would make sure they had another job before giving up the old one (52%).

On the other hand, around two-fifths of female clergy enjoy fast driving (43%) and just over a half of female clergy think that when the odds are against them it is still worth taking a chance (51%) and a third of female clergy find that life with no danger would be too dull for them (33%).

### ***Conclusions***

These data demonstrate that men and women in the normal population scored significantly higher on the levels of risk taking than the male and female clergy and supports the hypothesis. This finding, however, is not consistent with previous research

using Cattells 16PF amongst people in various forms of ministry (Chalmers, 1969; Pallone & Banks, 1968; Nauss, 1972b; Goodwin, 1990; Stewart, 1990).

## **Impulsiveness (impulsive/controlled)**

### ***Definition***

The second construct proposed by the Eysenck Personality Profiler within the higher order dimension of psychoticism is anchored by the opposite poles 'impulsive' and 'controlled'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'impulsiveness' and offer the following definition:

high scorers on the impulsiveness sub-factor are inclined to act on the spur of the moment, make hurried, often premature, decisions, and are usually carefree, changeable and unpredictable. Low scorers consider matters very carefully before making a decision. They are systematic, orderly, cautious, and plan their life out in advance; they think before they speak, and 'look before they leap'

One of the problems faced by psychologists when investigating the concept of impulsiveness has been the lack of consistent measures and understanding of the construct. For example, Thorndike (1966) published an impulsiveness scale one pole of which, he describes in the following words: 'carefree, happy-go-lucky, ready to do things at a moments notice.' The opposite pole of this scale is described as follows: 'careful to plan life out in advance, systematic, orderly foresighted.'

Barratt (1959, 1965), on the other hand, included items which relate to happy-go-lucky dispositions, others to excitement, to sociability, risk-taking, lack of patience and carefulness, liking of variety and sensation seeking.

It was Eysenck and Eysenck, (1977) who began the process of developing an understanding of the construct impulsivity. They demonstrated that impulsiveness should be seen in a broad and a narrow sense. In the broad sense (ImpB) impulsiveness breaks down into four factors, described as narrow impulsiveness (ImpN), risk-taking, non-planning and liveliness. This four dimensional model of impulsiveness has been further tested by Eaves, Martin and Eysenck (1977); Martin, Eaves and Fulker (1979) and Glow, Lange, Glow and Barrett (1983).

Impulsiveness has been further broken down into a two dimensional model, impulsiveness and venturesomeness (Eysenck & Eysenck, 1978; Eysenck & Zukerman, 1978). Finally a third dimension, labelled empathy was added alongside impulsiveness and venturesomeness to produce the Eysenck Impulsiveness Inventories (Eysenck & Eysenck, 1980; Eysenck & McGurk, 1980). A later development has been the Eysenck, Impulsiveness Inventory Form I<sub>6</sub> (Eysenck, Easting & Pearson, 1984). Impulsiveness has also been measured by personality scales including for example, Cattell's 16PF (Cattell, Eber & Tatsuoka, 1970).

### ***Scripture and impulsiveness***

In the Christian tradition there are two different ways of understanding the relationship between impulsiveness and scripture. The first relationship is one which encourages people to act impulsively. There are occasions in the Gospels when people act without

thinking, acting prematurely the disciples themselves act impulsively when they give up their businesses to follow Jesus:

then Jesus said to Simon, 'Do not be afraid; from now on you will be catching people.' When they had brought their boats to the shore, they left everything and followed him. (Luke 5: 10-11)

After this he went out and saw a tax-collector named Levi, sitting at the tax booth; and he said to him, 'Follow me.' And he got up, left everything and followed him. (Luke 5: 27-28)

The second understanding encourages people to plan. There are times when Jesus encourages the people to plan,

For which of you intending to build a tower, does not first sit down and estimate the cost, to see whether he has enough to complete it? Otherwise, when he has laid a foundation and is not able to finish, all who see it will begin to ridicule him, saying, This fellow began to build and was not able to finish (Luke 4: 28-30).

Or what King, going out to wage war against another King, will not sit down first and consider whether he is able with ten thousand to oppose the one who comes against him with twenty-thousand (Luke 4: 31).

Depending on which of these two scriptural perspectives dominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and impulsiveness.

### ***Psychological theory***

As the concept impulsiveness has developed the psychologists of religion have seen the recent subdivision of the broad factor of impulsivity as an opportunity to look at the relationship between impulsiveness and social attitudes (Pearson, Francis & Lightbown, 1986). In these social attitudes religion has been seen to occupy a prominent place

(Siegman, 1963). In a series of papers Francis and associates have shown that the strength of the relationship between extraversion and religiosity has declined as the impulsivity factor has been purified from extraversion (Francis, Pearson, Carter & Kay, 1981; Francis, Pearson & Kay, 1983; Francis & Pearson 1985a). At the same time Kay (1981) and Francis and Pearson (1985b) have begun to demonstrate that the relationship between psychoticism and religiosity.

### ***Empirical Evidence***

Siegelman and Peck (1960) administered Stern's Activities Index (Stern, Stein & Bloom, 1956) to three groups, two of the groups were students studying chemistry and theology and the third group were career military officers. The results showed that those studying theology for ministry scored significantly higher on the scale of impulsivity than the other two groups ( $p < .01$ ). Siegelman and Peck (1960) suggest that 'ministers are a good deal more spontaneous and unreflective in their reactions.'

Pearson, Francis and Lightbown (1986) administered the Eysenck Impulsiveness Inventory from I<sub>6</sub> (Eysenck, Easting & Pearson, 1984) and the ASC4B (Francis, 1978) to a sample consisting of 279 boys and 290 girls in order to investigate the relationship between religiosity and impulsivity. The results showed a significant negative correlation between religiosity and impulsivity ( $p < .001$ ).

Robinson (1990) investigated the relationship between Eysenck's personality measures and religious orientation. He administered the Eysenck Personality Questionnaire

(Eysenck & Eysenck, 1975); the Eysenck Personality Inventory extraversion scale (Eysenck & Eysenck, 1968) and the Religious Orientation Inventory (ROI, Allport & Ross, 1967) to 194 introductory psychology students. The results showed a significantly positive correlation between extrinsic and intrinsic religiosity and impulsivity amongst females ( $p < .05$ ). There was no significant difference amongst the male sample.

Nauss (1972b) administered Cattell's personality scale the 16PF (Cattell, 1957) to 64 graduating seminarians from Springfield, Illinois. The results showed that these seminarians scored higher on the scale of impulsivity than men in general.

Scordato (1975) administered Cattell's personality scale the 16PF (Cattell, 1957) to 129 seminary persisters in the United States of America. The results showed that seminarians scored higher on the scale of impulsivity than men in general.

Pallone and Banks (1968) administered the 16PF to 21 Seventh-day Adventists from a seminary in North America. The results showed that these seminarians scored higher on the scale of impulsivity than men in general.

### ***Hypothesis***

The link between religion and impulsivity shows that religious people tend to be more impulsive. Psychological theory has discovered that as impulsivity has been taken out of extraversion so the link with religiosity has declined. The empirical evidence has revealed that those in ministry score higher on impulsivity, whilst the Christian scriptures

show that a religious person can be both impulsive and also plan. It is hypothesised on the basis of the empirical evidence that ministers of religion will score higher on impulsivity than people in the normal population.

### ***Scale Properties***

Table 10.4 reports on the reliability of the 20 item index of impulsiveness and gives the item rest of scale correlations. The impulsiveness scale achieved an alpha coefficient of .78 for the male clergy and .75 for the female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the Findings***

Table 10.5 presents the mean scale scores on the index of impulsiveness for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate that men in the normal population scored significantly higher on the scale of impulsivity than male clergy. Females in the normal sample scored significantly higher on the scale of impulsivity than the female clergy. There was no significant difference between male and female clergy on the impulsivity scale. The females in the normal sample however scored significantly higher on the scale of impulsivity than the males in the normal sample.

In summary these data demonstrate that male and female clergy are less impulsive than men and women in the normal population and that there is no significant difference between male and female clergy on the index of impulsivity.

Table 10.4 Impulsivenss (impulsive/controlled) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you often change your interests?	0.2494	0.2054
Do you like doing things in which you have to act quickly?	0.2855	0.2474
Before making up your mind, do you carefully consider all the advantages and disadvantages?	0.4343	0.3578
Do you often do things on the spur of the moment?	0.4886	0.4903
Do you generally do and say things without stopping to think?	0.5116	0.4180
Do you prefer activities that just happen to those planned in advance?	0.3593	0.4083
Do you mostly speak before thinking things out?	0.3698	0.3250
Do you like planning things well ahead of time?	0.2981	0.2955
When you want to buy something expensive can you save up for some time patiently?	0.3139	0.2331
Do you often buy things on impulse?	0.4199	0.3619
If it were practically possible would you like to live each day as it comes along?	0.2578	0.1685
Do you often get into difficulty because you do things without thinking?	0.4050	0.3665
Would you agree that planning things ahead takes the fun out of life?	0.3726	0.3004
Do you usually make up your mind quickly?	0.2567	0.1468
Do you usually think carefully before doing anything?	0.4781	0.5181
Do you get so excited and involved with new and exciting ideas that you never think of the possible snags?	0.3985	0.4190
When you go on a trip do you like to plan routes and timetables carefully?	0.2572	0.2714
Are you an easy-going person not generally bothered about having a place for everything and everything in its place?	0.2012	0.2182
Do you get bored more easily than most people doing the same old things?	0.2335	0.2686
Do you think an evening out is more successful if it is arranged at the last moment?	0.3006	0.2970
Alpha	0.7796	0.7510

Table 10.6 penetrates behind the overall mean scores recorded on the index of impulsiveness to examine the percentage of male and female clergy who endorse certain items. The results show that three-quarters of male clergy like planning things well ahead of time (75%). Just over two-thirds of male clergy before making their mind up, carefully consider all the advantages and disadvantages (67%). That three-fifths of male clergy usually think carefully before doing anything (60%), plan routes and timetables carefully when they go on a trip (60%) and over a half of male clergy save up for some time patiently when they want to buy something expensive (54%).

Table 10.5 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	14.93	7.24	18.61	7.45
Female	14.69	6.82	20.15	7.52

  

Male clergy/female clergy,	t = 0.640	p < NS
Male clergy/male norms,	t = 10.469	p < .001
Female clergy/female norms,	t = 13.057	p < .001
Male norms/female norms	t = 3.841	p < .001

On the other hand, over a half of male clergy are easy-going people who are not generally bothered about having a place for everything and everything in its place (51%), like doing things in which they have to act quickly (52%), often do things on the spur of the moment (53%), usually make up their minds quickly (56%) and would if it were practically possible live each day as it comes (58%). Over two-fifths of male clergy often buy things on impulse (41%).

Table 10.6 Percentage endorsement of the twenty item index of impulsiveness (impulsiveness/controlled) of for male and female clergy

	Male %	Female %
Do you often change your interests?	16	14
Do you like doing things in which you have to act quickly?	52	42
Before making up your mind, do you carefully consider all the advantages and disadvantages?	67	66
Do you often do things on the spur of the moment?	53	49
Do you generally do and say things without stopping to think?	18	20
Do you prefer activities that just happen to those planned in advance?	25	25
Do you mostly speak before thinking things out?	19	20
Do you like planning things well ahead of time?	75	76
When you want to buy something expensive can you save up for some time patiently?	54	61
Do you often buy things on impulse?	41	42
If it were practically possible would you like to live each day as it comes along?	58	69
Do you often get into difficulty because you do things without thinking?	13	11
Would you agree that planning things ahead takes the fun out of life?	8	5
Do you usually make up your mind quickly?	56	56
Do you usually think carefully before doing anything?	60	60
Do you get so excited and involved with new and exciting ideas that you never think of the possible snags?	29	29
When you go on a trip do you like to plan routes and timetables carefully?	60	55
Are you an easy-going person not generally bothered about having a place for everything and everything in its place?	51	49
Do you get bored more easily than most people doing the same old things?	29	25
Do you think an evening out is more successful if it is arranged at the last moment?	15	12

These data also demonstrate that amongst female clergy three-quarters of them like planning things well ahead of time (76%). Two-thirds of female clergy before making their mind up, carefully consider all the advantages and disadvantages (66%). Three-fifths of the female clergy usually think carefully before doing anything (60%), and save up for some time patiently when they want to buy something expensive (61%). Over a

half of the male clergy plan routes and timetables carefully when they go on a trip (55%).

On the other hand, over two-thirds of female clergy would if it were practically possible live each day as it comes (69%). Around a half of female clergy are easy-going people who are not generally bothered about having a place for everything and everything in its place (49%) often do things on the spur of the moment (49%), usually make up their minds quickly (56%) Over two-fifths of female clergy often buy things on impulse (42%) and like doing things in which they have to act quickly (42%).

### ***Conclusions***

These data demonstrate that men and women in the normal population score significantly higher than male and female clergy on the index of impulsiveness. This finding is not consistent with previous research using Cattell's 16PF (Cattell, Eber & Tatsuoka, 1970) amongst people in various forms of ministry (Nauss, 1972b; Scordato, 1975; Pallone & Banks, 1968) and does not confirm the hypothesis.

## **Irresponsibility (irresponsible/responsible)**

### ***Definition***

The third construct proposed by the Eysenck Personality Profiler within the higher order dimension of psychoticism is anchored by the opposite poles 'irresponsible' and 'responsible.' In the original formulation Eysenck and Wilson (1976) describe this construct as responsibility and offer the following definition:

people who score high on the responsibility sub-factor are likely to be conscientious, reliable, trustworthy and serious-minded, possibly even a little bit compulsive. Low scorers, by contrast, are inclined to be casual, careless of protocol, late with commitments, unpredictable, and perhaps socially irresponsible. All this is within the normal range, however, so no implication of psychopathy or delinquency is intended even for rock bottom scores. While it may be true to say that psychopaths and criminals are generally irresponsible the converse is by no means certain; many people are low on this factor without having the slightest criminal inclination.

Responsibility is a term often heard in the humanistic analyses of personality. The psychologist Carl Rogers exemplified the idea that each person is responsible for his or her own life and maturity (Friedman & Schustack, 1999). There has, however, been very little research into the dimension of responsibility. The only available personality scale that includes responsibility appears to be the California Psychological Inventory (Gough, 1975).

### ***Scripture and irresponsibility***

In the Christian tradition there are two different ways of understanding the relationship between irresponsibility and religion. The first understanding is one which suggests that people should be irresponsible. Jesus encourages irresponsibility when he chooses his disciples. Peter leaves his fishing business, his wife and his sick mother-in-law to follow Jesus:

After leaving the synagogue he entered Simon's house. Now Simon's mother-in-law was suffering from a high fever, and they asked him about her. Then he stood over her and rebuked the fever, and it left her. Immediately she got up and began to serve them (Luke 4: 38-39).

Jesus also encourages irresponsibility when he encourages the young man to follow him:

To another he said, 'Follow me.' But he said, 'Lord first let me go and bury my Father.' But Jesus said to him, 'Let the dead bury their own dead; but as

for you go and proclaim the Kingdom of God.' Another said, 'I will follow you Lord; but let me first say farewell to those at my home.' Jesus said to him, 'no one who puts a hand to the plough and looks back is fit for the Kingdom of God' (Luke 9: 59-62).

The second understanding is that of taking responsibility. For example, the parable of the prodigal son reveals that the older brother who remained at home is rewarded for being responsible:

Now his elder son was in the field; and when he came and approached the house, he heard music and dancing. He called one of the slaves and asked what was going on. He replied, 'Your brother has come, and your father has killed the fatted calf, because he has got him back safe and sound.' Then he became angry and refused to go in. His father came out and began to plead with him. But he answered his father, 'Listen! For all these years I have been working like a slave for you, and I have never disobeyed your command; yet you have never given me even a young goat so that I might celebrate with my friends. But when this son of yours came back, who has devoured your property with prostitutes, you killed the fatted calf for him!' Then the father said to him, 'Son, you are always with me, and all that is mine is yours. But we had to celebrate and rejoice, because this brother of yours was dead and has come to life; he was lost and has been found' (Luke 15: 25- 32).

There is also the parable of the ten bridesmaids who went to meet the bridegroom:

Five of them were foolish and five wise. When the foolish took their lamps, they took no oil with them; but the wise took flasks of oil with their lamps. As the bridegroom was delayed all of them became drowsy and slept. But at midnight there was a shout, 'Look here is the bridegroom! Come out to meet him.' Then all those bridesmaids got up and trimmed their lamps. The foolish said to the wise, 'Give us some of your oil, for our lamps are going out.' But the wise replied, 'No! there will not be enough for you and for us; you had better go to the dealers and buy some for yourselves.' And while they went to buy it, the bridegroom came, and those who were ready went with him into the wedding banquet and the door was shut (Matthew 25: 2-10).

Depending on which of these two scriptural perspectives dominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative

correlation between scripture and risk-taking.

### ***Psychological theory***

There is no theoretical research available into the psychology of religion and irresponsibility.

### ***Empirical evidence***

Bergin, Masters and Richards (1987) used Allport and Ross' (1967) Religious Orientation scale to measure intrinsic and extrinsic religiosity and the California Psychological Inventory (Gough, 1975) to assess the relationship between religiosity and certain personality variables. Responsibility is one of the traits found in the California Psychological Inventory (Gough, 1975) and the results show that responsibility is positively associated with intrinsic religiosity ( $p < .005$ ) and negatively associated with extrinsic religiosity ( $p < .05$ ).

### ***Hypothesis***

The link between religion and irresponsibility is tenuous. The Christian scriptures advocate that irresponsibility is called for alongside responsibility. The psychological theory lacks research into irresponsibility and religion and there is only one empirical research article relating religion to responsibility. There is insufficient evidence to make a hypothesis as to whether religious people should be more or less irresponsible.

## Scale Properties

Table 10.7 Irresponsibility (irresponsible/responsible) reliability analysis

	Item rest of scale correlation	
	Male	Female
Did you ever play truant in your school days?	0.1757	0.1128
Are you inclined to be over conscientious?	0.3009	0.2624
Do you often leave things to the last minute?	0.4282	0.4612
Does it often take you a long time to get started on something?	0.3809	0.3145
Are you normally on time for appointments?	0.1613	0.1833
Do you usually answer a personal letter immediately after you have received it?	0.2717	0.2153
Do you sometimes have a tendency to be inconsistent and untidy in your work?	0.4808	0.3920
Do you often forget little things that you are supposed to do?	0.3434	0.3696
Do you ever have a tendency to 'let things slide'?	0.4441	0.4527
Can you honestly say that you honour your commitments more than most people?	0.3466	0.2553
Do you sometimes drink alcohol till you reach a state of intoxication?	0.2236	0.1781
Can you always be fully relied upon?	0.4154	0.3643
Are you inclined to live each day as it comes along?	0.1480	0.1406
If you found something valuable in the street would you hand it in to the police?	0.1186	0.0633
Do you always follow the rule 'business before pleasure'?	0.2593	0.2764
Do you have regular dental check-ups?	0.1701	0.1264
Have you ever 'played sick' to avoid an unpleasant responsibility?	0.2713	0.2670
If you say you will do something do you always keep your promise no matter how Inconvenient it might turn out to be?	0.3659	0.2781
Would you describe yourself as 'happy go lucky'?	0.1806	0.1480
Do you often not bother to cast your vote in an election?	0.0656	0.0786
Alpha	0.7167	0.6800

Table 10.7 reports on the reliability of the 20 item index of responsibility and gives the item rest of scale correlations. The responsibility scale achieved an alpha coefficient of .72 for the male clergy and .68 for the female clergy. The alpha coefficient for the male

clergy is above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument. The female clergy alpha coefficient is below the marker.

***Interpreting the findings***

Table 10.8 presents the mean scale scores on the index of irresponsibility for the male and female clergy separately and compares the score with the norms published in the test manual. The data demonstrate that men in the normal population record significantly higher on the scale of irresponsibility than male clergy and females in the normal population record significantly higher on the scale of irresponsibility than female clergy. Male clergy scored significantly higher on the scale of irresponsibility than female clergy and there is no significant difference between male and female norms on the scale of irresponsibility.

Table 10.8 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	15.72	6.54	17.56	3.39
Female	14.30	5.93	17.38	6.72
Male clergy/female clergy,		t =	4.235	p < .001
Male clergy/male norms,		t =	6.887	p < .001
Female clergy/female norms,		t =	8.327	p < .001
Male norms/female norms		t =	0.631	p < NS

In summary these data demonstrate that men and women in the normal population are more irresponsible than male and female clergy and that male clergy are more

irresponsible than female clergy.

Table 10.9 penetrates behind the overall mean scores recorded on the index of irresponsibility to examine the percentage of male and female clergy who endorse the individual items. These data demonstrate that nine out of every ten male clergy are normally on time for an appointment (91%) and if they found something valuable in the street would hand it in to the police (94%). Around two-thirds of male clergy can always be fully relied upon (69%), have regular dental checkups (65%) and will always keep their promise no matter how inconvenient it may be (68%). Well over half of male clergy are inclined to be over conscientious (56%).

On the other hand, over a half of male clergy often leave things to the last minute (56%), often forget little things that they are supposed to do (54%), are inclined to live each day as it comes (53%) and have a tendency to 'let things slide' (50%).

The data also demonstrate that nine out of every ten female clergy are normally on time for an appointment (91%) and if they found something valuable in the street would hand it in to the police (98%). Over three quarters of female clergy will keep their promise when they say that they will do something no matter how inconvenient it may be (78%), have regular dental checkups (76%) and just under three-quarters of female clergy can always be fully relied upon (74%). Around two-thirds of female clergy are inclined to be over conscientious (65%) and are inclined to live each day as it comes (63%)

On the other hand, a half of female clergy often leave things to the last minute (53%) and

under a half often forget little things that they a supposed to do (43%), and have a tendency to 'let things slide' (48%).

Table 10.9 Percentage endorsement of the twenty item of the index of irresponsibility (irresponsible/responsible) for male and female clergy

	Male %	Female %
Did you ever play truant in your school days?	23	19
Are you inclined to be over conscientious?	56	65
Do you often leave things to the last minute?	56	53
Does it often take you a long time to get started on something?	54	54
Are you normally on time for appointments?	91	91
Do you usually answer a personal letter immediately after you have received it?	24	19
Do you sometimes have a tendency to be inconsistent and untidy in your work?	44	34
Do you often forget little things that you are supposed to do?	54	43
Do you ever have a tendency to 'let things slide'?	50	48
Can you honestly say that you honour your commitments more than most people?	44	51
Do you sometimes drink alcohol till you reach a state of intoxication?	27	15
Can you always be fully relied upon?	69	74
Are you inclined to live each day as it comes along?	53	63
If you found something valuable in the street would you hand it in to the police?	94	98
Do you always follow the rule 'business before pleasure'?	17	19
Do you have regular dental check-ups?	65	76
Have you ever 'played sick' to avoid an unpleasant responsibility?	26	28
If you say you will do something do you always keep your promise no matter how inconvenient it might turn out to be?	68	78
Would you describe yourself as 'happy go lucky'?	21	18
Do you often not bother to cast your vote in an election?	12	9

### *Conclusions*

This data demonstrate that men and women in the normal population score significantly higher on the scale of irresponsibility than male and female clergy.

## **Manipulation (manipulation/empathy)**

### ***Definition***

The fourth construct proposed by the Eysenck Personality Profiler within the higher order dimension of psychoticism is anchored by the opposite poles 'manipulation' and 'empathy'. In their original formulation Eysenck and Wilson (1976) describe this construct as manipulation and offer the following definition:

high scorers on the manipulation sub-factor are detached, calculating, shrewd, worldly, expedient, and self-interested in their dealings with other people. Low scorers are warm-hearted, trusting, empathetic, straightforward and altruistic, perhaps also a little naive and gullible. This trait is sometimes called Machiavellianism because it corresponds to some extent with the political philosophy expounded by the Italian writer Niccolo Machiavelli.

Psychologists have investigated the construct empathy in terms of 'prosocial' behaviour. Prosocial behaviour is typically defined as voluntary behaviour intended to benefit another regardless of whether the behaviour is motivated by altruism or baser forms of motivation, such as rewards and social approval (Graziano & Eisenberg, 1999).

Some psychologists believe that prosocial tendencies are hereditary (Batson, 1983; Hoffman, 1981) others have found that prosocial responding is systematically related to both living in certain types of culture and being exposed to specific types of socialization techniques (Graziano & Eisenberg, 1999). Researchers have used a variety of methods to measure prosocial behaviour including for example, observation techniques (Dunn & Munn, 1986); donating to charity (Eisenberg, Shell, Pasternack, Lennon, Beller & Mathy, 1987); peer ratings of adolescents prosocial behaviour (Small, Zeldin & Savin-Williams,

1983); empathy is also a construct in the Eysenck Impulsiveness Inventory from I<sub>6</sub> (Eysenck, Easting & Pearson, 1984).

### ***Scripture and manipulation***

There is no relationship proposed between manipulation and religion by the Christian scriptures. Empathy or prosocial behaviour is recommended, however, by the Christian scriptures and they suggest that the follower of Christ is to love their neighbour as themselves. In the Gospel according to Luke we have the well known parable of the Good Samaritan to help identify who the neighbour is:

A man was going down from Jerusalem to Jericho, and fell into the hands of robbers, who stripped him, beat him, and went away, leaving him half dead. Now by chance a priest was going down that road; and when he saw him, he passed by on the other side. So likewise a Levite, when he came to the place and saw him, passed by on the other side. But a Samaritan while travelling came near to him; and when he saw him he was moved with pity. He went to him and bandaged his wounds, having poured oil and wine on them. Then he put him on his own animal, brought him to an inn, and took care of him. The next day he took out two denari, gave them to the innkeeper, and said, 'Take care of him; and when I come back, I will repay you whatever more you spend.' Which of these do you think, was a neighbour to the man who fell into the hands of the robbers (Luke 10:30-36).

There are even frequent suggestions in the Gospels to extend the scope of concern for others beyond strangers in need to enemies as well:

'But I say to you that listen, Love your enemies, do good to those who hate you, bless those who curse you, pray for those who abuse you. If anyone strikes you on the cheek, offer the other also; and from anyone who takes away your coat do not withhold even your shirt. Give to everyone who begs from you; and if anyone takes away your goods, do not ask for them again. Do to others as you would have them do to you. 'If you love those who love you, what credit is that to you? For even sinners love those who love them. If you do good to those who do good to you, what credit is that to you? For even sinners do the same. If you lend to those from whom you hope to receive, what credit is that to you? Even sinners lend to sinners, to receive as much again' (Luke 6: 27-34).

Scripture clearly informs the Christian that they should help others and show empathy to those in need.

### ***Psychological theory***

The passages quoted above urge the Christian to love both the stranger and the enemy, in other words to be concerned for those in need. But one of the problems of helping others is the motive behind such help. For some Christian people it may be self-concerned, in other words concerned to show others, self, and God that he or she is a good, kind, caring person that their religion celebrates. Religious charity may be motivated more by concern to put a star in one's own crown than by concern to alleviate the suffering of those in need (Batson, Schoenrade & Ventis, 1993). On the other hand, the motive behind helping others may well be a genuine concern to alleviate suffering.

Batson (1976) in his paper 'Religion as prosocial: agent or double agent' argues from a socio-biology basis and suggests that human beings have a genetically based altruistic tendency mediated by empathic emotion. Whilst this emotion is innately tied to kin systems Batson argues that it may be generalized to non kin by religious values that preach love of neighbour.

Does religion produce increased concern for others in need and a desire to relieve those needs, altruistic motivation, or does it produce increased self-concern and a desire to meet one's own need to appear good, kind, and caring, egotistic motivation? There is

very little empirical evidence to answer this question.

Batson, Schoenrade and Ventis (1993) have reviewed the literature concerning helping and amount of religious involvement, they found that in studies using self report or rating measures there is a positive, if rather weak relationship between involvement in religion and helpfulness. When using behavioural measures that control for positive self-presentation there is no relationship between helpfulness and religion.

### ***Empirical evidence***

Clark and Earner (1955) measure church attendance and peer observations of a person's kindness and honesty among 72 well known community members in a village in New York. The results showed a positive correlation between a person's church attendance and kindness and honesty.

Friedrichs (1960) measure frequency of church attendance, belief in God and self assessed helpfulness among 280 members of a fraternity in Columbia University. The results showed that both church attendance and belief in God showed low positive correlations with self-report of helpfulness ( $p < .01$ ).

Rokeach (1969) in a nationwide survey of 1,406 adults measured the relationship between religious affiliation, church attendance and the rank given to 'helpful' as an important personal value. The results showed no significant relationship with affiliation but a significant positive relationship with church attendance.

McKenna (1976) investigated the relationship between those adults in clergy and non-clergy homes who responded to a telephone call from a stranded female motorist who used the last of her change in making the mistaken call to the home instead of the garage. The results showed no reliable difference in rate of calling the garage from clergy and non-clergy homes.

Francis and Pearson (1985a) and Pearson, Francis and Lightbown (1986) administered the Eysenck Impulsiveness Inventory from I<sub>6</sub> (Eysenck, Easting & Pearson, 1984) and the ASC4B (Francis, 1978) to a sample consisting of 279 boys and 290 girls in order to investigate the relationship between religiosity and different dimensions of personality. The results showed a positive relationship between empathy and religion ( $p < .001$ ). Girls also scored higher on the scale of empathy than boys.

### ***Hypothesis***

It is clear that there is a positive relationship between empathy and religion. The Christian Scriptures, psychological theory and the empirical evidence suggests that those who attend church and claim a religious faith are more likely to show empathy than those who do not have a religious faith (Francis & Pearson, 1985a). It can be hypothesised that clergy would be more empathic than people in the normal population.

### ***Scale properties***

Table 10.10 Manipulation (manipulation/empathy) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you prefer to conceal from other people what your motives are for doing things?	0.1917	0.2404
Do you sometimes tell people what they want to hear so that they will be more receptive to you?	0.2513	0.1995
Does a sense of fair play restrict your business acumen?	0.0095	0.0373
Would you put yourself out a great deal to help somebody who was suffering an emotional hurt?	0.2164	0.0917
Is love more important to you than success?	0.2623	0.1014
Do you regard yourself as a skilled organizer and manipulator of other people?	0.1422	0.1205
Do you think that honesty is always the best policy?	0.2072	0.1741
Do you feel a great deal of sympathy for the underdog?	0.1554	0.1214
Do you normally tell the truth even though you might be better off lying?	0.2317	0.2352
Do you believe it is necessary to cut corners here and there in order to get on in the world?	0.2788	0.2568
Do you think that most people are basically good and kind?	0.0946	0.0132
Are you adept in the use of white lies?	0.2287	0.3640
Do you usually take care of your own interests before worrying about those of other people?	0.3463	0.1402
Would you befriend someone you did not really like if you thought he/she might be a useful contact?	0.2672	0.2289
Do you ever have to hurt other people to get what you want?	0.2381	0.1152
Do you think that there are better reasons for getting married than being in love?	0.0935	0.1752
Do you agree that it is naive and dangerous to place your complete trust in another person?	0.1900	0.1777
Do you sometimes use flattery consciously to assist in getting what you want?	0.2581	0.1890
Do you tend to get very closely involved with other people so that you share their troubles and give them emotional support?	0.2016	0.0913
Can you easily disregard the feelings of other people in order to deal more expediently with them?	0.2195	0.1856
<b>Alpha</b>	<b>0.5897</b>	<b>0.5209</b>

Table 10.10 reports on the reliability of the 20 item index of manipulation and gives the item rest of scale correlation. The manipulation scale achieved an alpha coefficient of .59 for male clergy and .52 for female clergy. Both alpha coefficients are below the .70

marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

***Interpreting the findings***

Table 10.11 presents the mean scale score on the index of manipulation for male and female clergy separately and compares the scores with the norms provided in test manual. The data demonstrate that men in the normal population score significantly higher on the scale of manipulation than male clergy. That females in the normal population record significantly higher on the scale of manipulation than female clergy. That male clergy record significantly higher on the scale of manipulation than female clergy and men in the normal population score significantly higher on the manipulation scale than females in the normal population.

Table 10.11 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	11.59	5.18	18.11	6.84
Female	8.94	4.32	14.82	5.91
Male clergy/female clergy,			t = 10.195	p< .001
Male clergy/male norms,			t = 23.161	p< .001
Female clergy/female norms,			t = 19.223	p< .001
Male norms/female norms			t = 9.609	p< .001

In summary these data demonstrate that men and women in the normal population are more manipulative than male and female clergy and that male clergy are more manipulative than female clergy.

Table 10.12 penetrates behind the overall mean score recorded on the index of manipulation to examine the percentage of male and female clergy who endorse individual items. These data demonstrate that around two-fifths of male clergy sometimes use flattery consciously to assist in getting what they want (43%). Around a third of male clergy agree that it is naive and dangerous to place their complete trust in another person (35%) and regard themselves as a skilled organiser and manipulator of other people (33%). A fifth of male clergy prefer to conceal from other people what their motives are for doing things (22%) and are adept in the use of white lies (21%).

On the other hand, well over four-fifths of male clergy agree that love is more important to them than success (89%), would put themselves out a great deal to help somebody who was suffering an emotional hurt (87%). Around four-fifths of male clergy feel a great deal of sympathy for the underdog (82%) and will normally tell the truth even though they may be better off lying (80%). Around two-thirds of male clergy tend to get very closely involved with other people (68%), think that honesty is the best policy (67%) and well over a half of male clergy think that most people are basically good and kind (57%).

These data also demonstrate that around two-fifths of female clergy sometimes use flattery consciously to assist in getting what they want (38%). Around a third of female

clergy agree that it is naive and dangerous to place their complete trust in another person (32%) and regard themselves as a skilled organiser and manipulator of other people (30%). A fifth of female clergy are adept in the use of white lies (21%).

Table 10.12 Percentage endorsement of the twenty item of the index of manipulation (manipulation/empathy) for male and female clergy

	Male %	Female %
Do you prefer to conceal from other people what your motives are for doing things?	22	15
Do you sometimes tell people what they want to hear so that they will be more receptive to you?	57	52
Does a sense of fair play restrict your business acumen?	52	55
Would you put yourself out a great deal to help somebody who was suffering an emotional hurt?	87	95
Is love more important to you than success?	89	92
Do you regard yourself as a skilled organizer and manipulator of other people?	33	30
Do you think that honesty is always the best policy?	67	64
Do you feel a great deal of sympathy for the underdog?	82	90
Do you normally tell the truth even though you might be better off lying?	80	83
Do you believe it is necessary to cut corners here and there in order to get on in the world?	22	10
Do you think that most people are basically good and kind?	57	70
Are you adept in the use of white lies?	21	21
Do you usually take care of your own interests before worrying about those of other people?	19	7
Would you befriend someone you did not really like if you thought he/she might be a useful contact?	15	7
Do you ever have to hurt other people to get what you want?	12	7
Do you think that there are better reasons for getting married than being in love?	19	20
Do you agree that it is naive and dangerous to place your complete trust in another person?	35	32
Do you sometimes use flattery consciously to assist in getting what you want?	43	38
Do you tend to get very closely involved with other people so that you share their troubles and give them emotional support?	68	89
Can you easily disregard the feelings of other people in order to deal more expediently with them?	17	9

On the other hand, well over four-fifths of female clergy agree that love is more important to them than success (92%), would put themselves out a great deal to help somebody who was suffering an emotional hurt (95%), feel a great deal of sympathy for the underdog (90%) and tend to get very closely involved with other people (89%). Around four-fifths of female clergy will normally tell the truth even though they may be better off lying (83%). Around two-thirds of female clergy think that honesty is the best policy (64%) and think that most people are basically good and kind (70%).

### ***Conclusions***

These data suggest that male and female clergy show more empathy and less manipulation than men and women in the normal population. This finding is consistent with previous research into religion and empathy (Clark & Earner, 1955; Friedrichs, 1960; Rokeach, 1969; Francis & Pearson, 1985a; Pearson, Francis & Lightbown, 1986)

## **Sensation Seeking (sensation seeking/unadventurous)**

### ***Definition***

The fifth construct proposed by the Eysenck Personality Profiler within the higher order factor of psychoticism is anchored by the opposing poles 'sensation seeking' and 'unadventurous'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'sensation-seeking' and offer the following definition:

high scorers are forever seeking thrills in life; they have an insatiable thirst for novel experiences and require regular 'jags' in order to stave off the boredom. To this end they will accept a moderate level of danger to life and limb. Low scorers have little

need for excitement or adventure; instead they prefer the secure and familiar comforts of 'home'

According to Friedman and Schustack (1999) sensation seekers are people who are always on the lookout for a new challenge or a new high. They have a constant tendency to seek out highly stimulating activities such as, sky-diving and they are attracted to the unknown. Risk taking, thrill seeking, and sensation seeking are known to be relatively stable personality characteristics. Psychologist Marvin Zuckerman (1979; 1983a; 1983b) developed a sensation-seeking scale, which is related, for example, to a love of travel and active sports. The instrument has subscales of thrill and adventure seeking, experience seeking, disinhibition and boredom susceptibility. A different approach to Zuckerman is Frank H Farelly's Type T Theory of psychobiological motives. Type T stands for thrill seeking (Morehouse, Farley & Youngquist, 1990). This theory derives from Eysenck's ideas about the physiological basis for introversion and extraversion. It suggests a psychobiological need for stimulation due to internal arousal deficit. It is argued that if type T people's needs for stimulation and risk taking can be satisfied by appropriate experiences in appropriate environments, they will be less likely to get into trouble. Sensation-seeking has also been measured using the Eysenck Impulsiveness Inventory Form I<sub>6</sub> (Eysenck, Easting & Pearson, 1984).

### ***Scripture and sensation seeking***

In the Christian tradition there are two different ways of understanding the relationship between sensation seeking and Scripture. The first understanding is one that gives

evidence of sensation-seeking behaviour, for example, sensation seeking behaviour can at times be seen in Jesus:

And these signs will accompany those who believe: by using my name they will cast out demons; they will speak in new tongues; they will pick up snakes in their hands, and if they drink any deadly thing, it will not hurt them; they will lay their hands on the sick, and they will recover (Mark 16: 17-18).

And early in the morning he came walking towards them on the Lake. But when the disciples saw him walking on the lake, they were terrified, saying, 'It is a ghost!' And they cried out in fear. But immediately Jesus spoke to them and said, 'Take heart, it is I; do not be afraid.' Peter answered him, 'Lord if it is you, command me to come to you on the water.' He said, 'Come.' So Peter got out of the boat, started walking on the water, and came towards Jesus (Matthew 14: 25-29).

The second understanding suggests the opposite and Jesus clearly does not want to appear to be sensation seeking when he refuses to be tempted by Satan:

Then the devil took him to Jerusalem, and placed him on the pinnacle of the temple, saying to him, 'If you are the Son of God, throw yourself down from here, for it is written, He will command his angels concerning you, to protect you, and on their hands they will bear you up, so that you will not dash your foot against a stone.' Jesus answered him, It is said, 'Do not put the Lord your God to the test.' When the devil had finished every test, he departed from him until an opportune time (Luke 4: 9-13).

Then there is the Transfiguration when Jesus tells his disciples to tell no one what they have seen:

Six days later, Jesus took with him Peter and James and his brother John and led them up a high mountain, by themselves. And he was transfigured before them, and his face shone like the sun, and his clothes became dazzling white. Suddenly there appeared to them Moses and Elijah, talking with him. Then Peter said to Jesus, 'Lord, it is good for us to be here; if you wish, I will make three dwellings here, one for you, one for Moses, and one for Elijah.' While he was still speaking, suddenly a bright cloud overshadowed them, and from the cloud a voice said, 'This is my Son, the Beloved; with him I am well pleased; listen to him!' When the disciples heard this, they fell to the ground and were

overcome by fear. But Jesus came and touched them, saying, 'Get up and do not be afraid.' And when they looked up, they saw no one except Jesus himself alone. As they were coming down the mountain, Jesus ordered them, 'Tell no one about the vision until after the Son of Man has been raised from the dead.' And the disciples asked him, 'Why, then, do the scribes say that Elijah must come first?' He replied, 'Elijah is indeed coming and will restore all things; but I tell you that Elijah has already come, and they did not recognize him, but they did to him whatever they pleased. So also the Son of Man is about to suffer at their hands.' Then the disciples understood that he was speaking to them about John the Baptist (Matthew 17:1-13).

Depending on which of these two scriptural perspectives dominate there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and sensation seeking.

### ***Psychological theory***

There appears to be very little research undertaken by the psychologists of religion into the relationship between sensation seeking and religion.

### ***Empirical Evidence***

Pearson, Francis and Lightbown (1986) administered the Eysenck Impulsiveness Inventory from I<sub>6</sub> (Eysenck, Easting & Pearson, 1984) and the ASC4B (Francis, 1978) to a sample consisting of 279 boys and 290 girls in order to investigate the relationship between religiosity and different dimensions of personality. The results showed no significant relationship between sensation seeking and religion.

### ***Hypothesis***

The link between sensation seeking and religion is not clear. The Christian Scriptures

clearly point to the fact that there were times in the ministry of Jesus when he showed traits of sensation seeking and there are other times when Jesus turned against it. There is no psychological theory to help understand the relationship between religion and sensation seeking and there is little empirical evidence. It is difficult to make a hypothesis as to whether those in ministry would be more or less sensation seeking.

### ***Scale Properties***

Table 10.13 reports on the reliability of the 20 item index of sensation seeking and gives the item rest of scale correlation. The sensation seeking scale achieved an alpha coefficient of 0.78 for the male clergy and .76 for the female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the findings***

Table 10.14 presents the mean scale scores on the index of sensation seeking for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate men in the normal population record significantly higher on the scale of sensation seeking than male clergy and that females in the normal population record significantly higher on the scale of sensation seeking than female clergy. Male clergy record significantly higher on the scale of sensation seeking than female clergy and men in the normal population record significantly higher on the scale of sensation seeking than females in the normal population.

Table 10.13 Sensation seeking (sensation seeking/unadventurous) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you often long for excitement?	0.2785	0.2180
Would you like to learn to fly an aeroplane?	0.4284	0.4984
Would you like to hunt lions in darkest Africa?	0.3376	0.3048
Would you enjoy a life of peace and serenity?	0.1888	0.1943
Would you enjoy seeing an action packed film?	0.2364	0.2138
Would you gate-crash a party?	0.3543	0.2655
Do you sometimes say something shocking just to see how people react?	0.2466	0.2734
Would you like to try parachute jumping?	0.5393	0.5228
Is boredom one of the things you fear most of all?	0.1100	0.1012
Do you like a great deal of variety and change in your life?	0.2960	0.3070
Does the sport of scuba-diving appeal to you?	0.4518	0.3951
Do you sometimes do slightly dangerous things just for the sensation it gives you?	0.5313	0.4771
Would mountain climbing be too dangerous for you to consider as a sport for yourself?	0.4242	0.4409
Would you like to ride in a racing car at 150 miles per hour?	0.5045	0.4947
Do you prefer to avoid the more adventurous rides at amusement parks?	0.3851	0.3517
Do you like to be in a climate that has very even temperatures?	0.1945	0.1862
Do you like to mix with people who are wild and unpredictable?	0.4079	0.3367
If you were offered an opportunity to go around the moon in a space-ship would you accept?	0.4302	0.4715
Do you enjoy horror movies such as Dracula and Frankenstein?	0.1676	0.0858
Would you take drugs that were likely to have strange effects on you such as causing hallucinations?	0.1990	0.1497
<b>Alpha</b>	<b>0.7763</b>	<b>0.7560</b>

In summary these data demonstrate that men and women in the normal population are more sensation seeking than male and female clergy and that male clergy are more sensation seeking than female clergy.

Table 10.15 penetrates behind the overall mean scores recorded on the index of sensation seeking to examine the percentage of male and female clergy who endorse the individual items. The data demonstrate that half of male clergy would enjoy a life of peace and serenity (55%) and prefer to avoid the more adventurous rides at amusement parks (50%). Less than three in ten of male clergy often long for excitement (27%), fear boredom (25%), and enjoy horror movies such as Dracula and Frankenstein (23%). Over a third of male clergy would like to be in a climate that has even temperatures (36%).

Table 10.14 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	16.82	7.51	24.09	6.91
Female	11.93	6.73	19.66	7.76

  

Male clergy/female clergy,	t = 12.741	p< .001
Male clergy/male norms,	t = 20.770	p< .001
Female clergy/female norms,	t = 18.213	p< .001
Male norms/female norms,	t = 11.256	p< .001

On the other hand, four-fifths of male clergy enjoy seeing action packed films (80%). Over a half of male clergy if they were offered an opportunity to go around the moon in a space-ship would accept (56%), want to learn to fly an aeroplane (55%), would like to ride in a racing car at 150 miles per hour (55%), and like a great deal of variety and change in their lives (51%).

The data also demonstrate that over two-thirds of female clergy prefer to avoid the more

adventurous rides at amusement parks (69%). Well over half of female clergy enjoy seeing an action packed film (56%), feel that mountain climbing would be too dangerous a sport for the to consider (56%) and would enjoy a life of peace and serenity (55%). Less than three in ten of female clergy often long for excitement (20%), fear boredom (23%), and enjoy horror movies such as Dracula and Frankenstein (5%). Over two-fifths of female clergy would like to be in a climate that has even temperatures (43%).

Table 10,15 Percentage endorsement of the twenty item of the index of sensation seeking (sensation seeking/unadventurous) for male and female clergy

	Male %	Female %
Do you often long for excitement?	27	20
Would you like to learn to fly an aeroplane?	55	35
Would you like to hunt lions in darkest Africa?	12	6
Would you enjoy a life of peace and serenity?	55	55
Would you enjoy seeing an action packed film?	80	56
Would you gate-crash a party?	12	4
Do you sometimes say something shocking just to see how people react ?	42	29
Would you like to try parachute jumping?	39	21
Is boredom one of the things you fear most of all?	25	23
Do you like a great deal of variety and change in your life?	51	53
Does the sport of scuba-diving appeal to you?	44	27
Do you sometimes do slightly dangerous things just for the sensation it gives you?	30	19
Would mountain climbing be too dangerous for you to consider as a sport for yourself?	46	56
Would you like to ride in a racing car at 150 miles per hour?	55	26
Do you prefer to avoid the more adventurous rides at amusement parks?	50	69
Do you like to be in a climate that has very even temperatures?	36	43
Do you like to mix with people who are wild and unpredictable?	22	15
If you were offered an opportunity to go around the moon in a space-ship would you accept?	56	39
Do you enjoy horror movies such as Dracula and Frankenstein?	23	5
Would you take drugs that were likely to have strange effects on you such as causing hallucinations?	5	2

On the other hand, well over a half of female clergy enjoy seeing an action packed film (56%) and like a great deal of variety and change in their lives (53%). Over a third of female clergy if offered an opportunity to go around the moon in a space-ship would accept (39%) and want to learn to fly an aeroplane (35%).

### ***Conclusions***

This data demonstrate that men and women in the normal population score significantly higher on the scale of sensation seeking than the male and female clergy.

## **Masculinity-Femininity (toughminded/tenderminded)**

### ***Definition***

The sixth construct proposed by the Eysenck Personality Profiler within the higher order dimension of psychoticism is anchored by the opposite poles 'toughminded' and 'tenderminded'. In their original formulation Eysenck and Wilson (1976) define the opposite poles of masculinity (toughmindedness) and femininity (tendermindedness).

Using these definitions of masculinity and femininity Eysenck and Wilson (1976) offer the following definition:

people scoring high on the masculinity-femininity sub-factor are unconcerned about crawling insects, the sight of blood and other gruesome spectacles; they are tolerant of - and probably enjoy - violence, obscenity and swearing; they are disinclined to show weakness or sentimentality of any kind, for example by crying or expressing love, and rely on reason rather than intuition. Low scorers are easily upset by bugs, blood, brutality, etcetera, and have a high interest in delicate matters such as romance, children, fine arts, flowers and clothes.

Masculinity and femininity have often been considered lasting, internal personality characteristics, or traits. Although many psychologists agree that masculinity and femininity are important traits, few have actually attempted to define these characteristics but have suggested that the traits of masculinity and femininity are composed of the characteristics exhibited by males and females respectively (Friedman & Schustack, 1999). It was Sandra Bem (1974) who classified people as feminine, that is, high in endorsement of feminine characteristics; masculine, that is, endorsing more masculine characteristics; androgynous, high in both masculine and feminine traits, or undifferentiated, that is, low in both categories. Bem is not the only person to have measured masculinity and femininity, it has been measured for example, using Eysenck's Tender-mindedness Scale (10T, Eysenck, 1954) and Cattell's, 16PF (Cattell, Eber & Tatsuoka, 1970).

### ***Scripture and masculinity-femininity***

In the Christian tradition there are two ways of understanding the relationship between masculinity-femininity. The first understanding is one that encourage people to be tough in order to follow Christ:

Whoever comes to me and does not hate Father and Mother, wife and children, brother and sisters, yes, and even life itself cannot be my disciple (Luke 14: 26).

Someone told him, 'Look, your mother and your brothers are standing outside, wanting to speak to you.' But to the one who told him this, Jesus replied, 'Who is my mother, and who are my brothers?' (Matthew 12:47).

The second understanding suggests that a person should show tenderness and compassion:

People were bringing little children to him in order that he might touch them; and the disciples spoke sternly to them. But when Jesus saw this, he was indignant and said to them, 'Let the little children come to me; do not stop them; for it is to such as these that the Kingdom of God belongs' (Mark 10:13-14).

As he went ashore, he saw a great crowd; and he had compassion for them, because they were like sheep without a shepherd; and he began to teach them many things (Mark 6:34).

Depending on which of these two scriptural perspective dominates there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and masculinity-femininity .

### ***Psychological theory***

Psychological theory has, over a number of years, investigated the relationship between gender and religiosity. They have concluded that women are more religious than men (Francis, 1997). There are a number of factors which influence a person's religiosity, including social and contextual influences, but there are also psychological characteristics which differentiate between men and women. These psychological characteristics are built on the theory of feminine and masculine orientations and are defined as personality constructs. Bem (1981) developed this theory in her Bem Sex Role Inventory. Using this theory Thompson (1991) argued that individual differences in religiosity should be affected more by gender orientation than by being male or female. According to this theory being religious is seen in terms of feminine orientation and both men and women can have a feminine orientation. Thompson's empirical analysis, using data from 358 undergraduate students in New England, provided clear support for the view that being religious is a function of gender orientation.

### ***Empirical evidence***

Eysenck (1976) administered a Wilson Patterson Type Questionnaire of Social Attitudes to 1,442 people in order to give a structure to social attitudes. In conclusion his theory of social attitudes suggests that religion is a tender minded attitude and is marked by items like moral training, liberals, inborn conscience, Bible truth, chastity and self-denial.

Siegman (1962) administered Eysenck's Tendermindedness Scale (the 10<sub>T</sub>, Eysenck, 1954) Questionnaire the Eysenck extraversion (E) scale (Eysenck, 1956) and a Religious attitude scale (RAS, Siegman, 1962) to 43 male undergraduates from the University of North-Carolina The results showed a significant positive correlation between religiosity and tender-mindedness scales ( $p < 0.01$ )

Barton and Vaughan (1976) administered Cattell's 16PF (Cattell, Eber & Tatsuoka, 1970) to 593 school seniors from Auckland, Wellington and Christchurch New Zealand. The results showed that active church members tended to be more tender-minded than non-active church members.

Hills and Argyle (1998) administered the Oxford Happiness Inventory (Argyle, Martin & Lu, 1995) the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975) and assessed 4 activities: sports, TV, Music, and Church. The results showed church members exhibit significantly lower scores on the psychoticism scale (tough mindedness).

Nauss (1972a) investigated the possibility of personality change among ministerial students. He administered the Cattell's sixteen personality factor questionnaire (16PF) to seminary students at the start of their training and again three years later in their final year. He found that at graduation students scored significantly less on the toughminded-tenderminded sub-scale ( $p < .01$ ).

Childers and White (1966) administered the 16PF to 72 male students at a southern theological institution in the United States of America. The results showed that these students scored higher on the scale of emotional sensitivity and empathic understanding these are emotions which belong to tendermindedness.

Pallone and Banks (1968) administered the 16PF to 21 Seventh-day Adventists from a seminary in North America. The results showed that these seminarians scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Chalmers (1969) administered the 16PF to 114 active Seventh-day Adventist ministers in the United States of America. The results show that the ministers scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Chalmers (1969) administered the 16PF to 35 more effective Seventh-day Adventist ministers and to 35 less effective Seventh-day Adventist ministers in the United States of

America. The results show that the more effective ministers scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Cattell, Eber and Tatsuoka (1970) reported on data which used the 16PF from 1,707 Roman Catholic clergy from the United States of America. The results showed that these Roman Catholic clergy scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Nauss (1972b) administered the 16PF to 255 persisting seminarians from Springfield, Illinois. The results showed that these seminarians scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Nauss (1972b) administered the 16PF to 64 graduating seminarians from Springfield, Illinois. The results showed that these seminarians scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Wilson (1974) administered the 16PF to 100 Roman Catholic priests in the United States of America. The results reveal that these priests scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Scordato (1975) administered the 16PF to 129 seminary persisters in the United States of America. The results showed that these seminarians scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Stewart (1990) administered the 16PF to 54 protestant ministers in the United States of America. The results showed that these protestant ministers scored higher on the scale of emotional sensitivity and empathic understanding which are emotions belonging to tendermindedness.

Musson (1998) administered the 16PF (Cattell, Eber, & Tatsuoka, 1970) questionnaire to 441 male Anglican clergy of the Church of England. The results showed that clergymen are more tenderminded than the general population ( $p < .001$ ).

### ***Hypothesis***

The link between toughminded and tenderminded attitudes and religion is clear. The psychological theory and the empirical research suggest that religious people have more tenderminded attitudes which belong to the more feminine personality profile. The Christian scriptures give a balanced view but it can be hypothesised that those in ministry should display more tenderminded attitudes and show a more feminine personality.

### ***Scale Properties***

Table 10.16 Masculinity-femininity (toughminded/tender minded) reliability analysis

	Item rest of scale correlation	
	Male	Female
Do you ever break down and cry?	0.1041	0.1045
Are snakes abhorrent to you?	0.2052	0.2116
Are you afraid of creepy crawly things such as worms and spiders?	0.1234	0.2332
Are you curious about the workings of engines and other mechanical devices?	0.1107	0.2012
As a child did you enjoy playing with guns?	0.2117	0.1461
Do crude and vulgar jokes make you feel uncomfortable?	0.0156	0.0876
Would you rather be a dentist than a designer?	0.0810	0.1002
Do you enjoy watching competitive physical sports such as boxing and football?	0.2043	0.1069
Do you find it difficult to resist picking up and cuddling small furry animals?	0.0099	0.0146
Do you like to engage in rough physical activity?	0.2247	0.1441
Do you enjoy shopping?	0.0722	0.0666
Do you like scenes of violence and torture in the movies?	0.1738	0.0856
Do you like war stories?	0.1879	0.1616
Do you enjoy reading romantic stories?	0.0646	0.1342
Are you very sensitive to beauty in your surroundings?	0.1009	0.1154
Do you exploit your friends and acquaintances for your own purposes?	-0.0584	0.0378
Are you somewhat frightened of the dark?	0.1236	0.1734
Do you feel like crying if you see a sad film?	0.1108	0.2038
At school did you prefer English Literature to General Science?	0.1509	0.1589
Would the sight of a great deal of blood make you feel faint?	0.1852	0.1873
Alpha	0.4267	0.4505

Table 10.16 reports on the reliability of the 20 item index of masculinity and gives the item rest of scale correlations. The masculinity scale achieved an alpha coefficient of .43 for the male clergy and .45 for the female clergy. Both alpha coefficients are below the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

***Interpreting the findings***

Table 10.17 presents the mean scale scores on the index of masculinity for male and female clergy separately and compares the scores with the norms provided in the test manual. The data demonstrate that men in the normal population record significantly higher scores on the scale of masculinity-femininity than male clergy. Females in the normal population record significantly higher on the scale of masculinity-femininity than female clergy. Male clergy record significantly higher on the scale of masculinity-femininity than female clergy. Men in the normal population record significantly higher on the scale of masculinity-femininity than females in the normal population.

In summary male and female clergy display more feminine characteristics than men and women in the normal population and male clergy display less feminine characteristics than female clergy.

Table 10.17 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	19.39	4.84	25.07	5.57
Female	12.42	4.45	13.58	5.05

Male clergy/female clergy,	t = 27.983	p < .001
Male clergy/male norms,	t = 23.067	p < .001
Female clergy/female norms,	t = 4.176	p < .001
Male norms/female norms	t = 40.347	p < .001

Table 10.18 penetrates behind the overall mean scores recorded on the index of masculinity-femininity to examine the percentage of male and female clergy who endorse

the individual items. These data demonstrate that nine in ten of male clergy don't like scenes of violence and torture in the movies (95%). Over two-thirds of male clergy are very sensitive to beauty in their surroundings (70%) and feel like crying if they see a sad film (67%). Over half of male clergy break down and cry (55%) and over two-fifths of male clergy find that crude and vulgar jokes make them feel uncomfortable (45%).

On the other hand, around half of male clergy enjoy watching competitive physical sports such as boxing or football (54%) and enjoyed playing with guns when they were children (50%). Over a third of male clergy like war stories (37%) and under a third like to engage in rough physical activity (31%).

These data also demonstrate almost all female clergy don't like scenes of violence and torture in the movies (99%). Over four-fifths of female clergy feel like crying if they see a sad film (89%), break down and cry (87%) are very sensitive to beauty in their surroundings (83%). Over three-fifths of female clergy preferred English Literature to General Science when they were in school (69%) and find that crude and vulgar jokes make them feel uncomfortable (62%).

On the other hand, less than a fifth of female clergy enjoy watching competitive physical sports such as boxing or football (17%), like war stories (13%), like to engage in rough physical activity (11%) and enjoyed playing with guns when they were children (10%).

Table 10.18 Percentage endorsement of the twenty item of the index of masculinity-femininity (toughmindedness/tendermindedness) for male and female clergy

	Male %	Female %
Do you ever break down and cry?	55	87
Are snakes abhorrent to you?	24	31
Are you afraid of creepy crawly things such as worms and spiders?	13	21
Are you curious about the workings of engines and other mechanical devices?	45	22
As a child did you enjoy playing with guns?	50	10
Do crude and vulgar jokes make you feel uncomfortable?	45	62
Would you rather be a dentist than a designer?	14	12
Do you enjoy watching competitive physical sports such as boxing and football?	54	17
Do you find it difficult to resist picking up and cuddling small furry animals?	25	46
Do you like to engage in rough physical activity?	31	11
Do you enjoy shopping?	45	59
Do you like scenes of violence and torture in the movies?	5	1
Do you like war stories?	37	13
Do you enjoy reading romantic stories?	18	48
Are you very sensitive to beauty in your surroundings?	70	83
Do you exploit your friends and acquaintances for your own purposes?	3	2
Are you somewhat frightened of the dark?	11	18
Do you feel like crying if you see a sad film?	67	89
At school did you prefer English Literature to General Science?	49	69
Would the sight of a great deal of blood make you feel faint?	28	30

### *Conclusions*

These data demonstrate that male and female clergy score lower on the scale of masculinity than men and women in the normal population. This finding is consistent with previous research between religion and toughmindedness (Siegman, 1963; Barton & Vaughan, 1976; Hills & Argyle, 1998). It is also consistent with previous research between those in ministry and tenderminded attitudes (Childers & White, 1966; Pallone

& Banks, 1968; Chalmers, 1969; Cattell, Eber & Tatsuoka, 1970; Nauss, 1972a; Nauss, 1972b; Wilson, 1974; Scordato, 1975; Stewart, 1990; Musson, 1998).

## **Unreflectiveness (practical/reflective)**

### ***Definition***

The seventh construct proposed by the Eysenck Personality Profiler within the higher order dimension of psychoticism is anchored by the opposite poles 'practical' and 'reflective'. In their original formulation Eysenck and Wilson (1976) describe this construct as 'reflectiveness' and offer the following definition:

high scorers on the reflectiveness scale are inclined to be interested in ideas, abstractions, philosophical questions, discussions, speculations and knowledge 'for the sake of knowledge'; that is, they are generally thoughtful (in the literal sense of the term) and introspective. Low scorers have a practical bent, are interested in doing things rather than thinking about them, and tend to be impatient with 'ivory tower' theorizing.

The construct unreflectiveness has been of little interest to psychologists and the only personality scale that appears to have a construct related to reflectiveness is the 16PF (Cattell, Eber & Tatsuoka, 1970).

### ***Scripture and unreflectiveness***

In the Christian tradition there are two ways of understanding the relationship between unreflectiveness and Scripture. The first understanding is one which encourages people to be practical. Take for example the very practical parable of the feeding of the five thousand:

On their return the apostles told Jesus all they had done. He took them with him and withdrew privately to a city called Bethsaida. When the crowds found out about it, they followed him; and he welcomed them, and spoke to them about the kingdom of God, and healed those who needed to be cured. The day was drawing to a close, and the twelve came to him and said, 'Send the crowd away, so that they may go into the surrounding villages and countryside, to lodge and get provisions; for we are here in a deserted place.' But he said to them, 'You give them something to eat.' They said, 'We have no more than five loaves and two fish unless we are to go and buy food for all these people.' For there were about five thousand men. And he said to his disciples, 'Make them sit down in groups of about fifty each.' They did so and made them all sit down. And taking the five loaves and the two fish, he looked up to heaven, and blessed and broke them, and gave them to the disciples to set before the crowd. And all ate and were filled. What was left over was gathered up, twelve baskets of broken pieces (Luke 9: 10-17).

Then there are the preparations for the Passover which is to be Jesus' 'Last Supper.'

On the first day of the Unleavened Bread, when the Passover Lamb is sacrificed, his disciples said to him, 'Where do you want us to go and make the preparations for you to eat the Passover?' So he sent two of his disciples, saying to them, 'Go into the city, and a man carrying a jar of water will meet you; follow him, and wherever he enters, say to the owner of the house, 'Teacher asks, Where is my guest room where I may eat the Passover with my disciples?' he will show you a large room upstairs, furnished and ready. Make preparations for us there (Mark 14: 12-15).

The second understanding suggests the importance of the big picture, the ideas, the abstractions and the parables are full of these instances:

He then told them another parable: 'The Kingdom of heaven is like yeast that a women took and mixed in with three measures of flour until all of it was leavened.' Jesus told the crowds all these things in parables; without a parable he told them nothing. This was to fulfill what had been spoken through the prophet: I will open my mouth to speak in parables; I will proclaim what has been hidden from the foundation of the world' (Matthew 13: 33-35).

Then the disciples came and asked him, 'Why do you speak to them in parables?' He answered, 'To you it has been given to know the secrets of the Kingdom of heaven, but to them it has not been given. For to those who have, more will be given, and they will have abundance; but from those who

have nothing, even what they have will be taken away. The reason I speak to them in parables is that 'seeing they do not perceive, and hearing they do not listen, nor do they understand...'

But blessed are your eyes, for they see, and your ears, for they hear. Truly I tell you, many prophets and righteous people longed to see what you see, but did not see it, and to hear what you hear, but did not hear it (Matthew 13: 10-13; 16-17).

Depending on which of these two scriptural perspective dominates there is scriptural authority to support both of the conflicting hypotheses of a positive as well as a negative correlation between scripture and unreflectiveness.

### ***Psychological theory***

Searches have failed to find theoretical research by the psychologists of religion into the relationship between unreflectiveness and religion.

### ***Empirical evidence***

Musson (1998) administered the 16PF (Cattell, Eber, & Tatsuoka, 1970) questionnaire to 441 male Anglican clergy of the Church of England. The results showed that clergymen scored significantly lower on the practical scale and were therefore more imaginative than the general population ( $p < .001$ ).

### ***Hypothesis***

The link between religion and unreflectiveness is not clear. The Christian Scriptures propose two ways of understanding the relationship, there is no psychological theory and

there is only one available piece of research, if a hypothesis was made based on this piece of research it would be that clergy should appear more reflective and imaginative than the general population.

### ***Scale Properties***

Table 10.19 reports on the reliability of the 20 item index of unreflectiveness and gives the item rest of scale correlations. The unreflectiveness scale achieved an alpha coefficient of .75 for the male clergy and .74 for the female clergy. Both alpha coefficients are above the .70 marker given by Kline (1993) as indicating a unidimensional and homogeneous psychometric instrument.

### ***Interpreting the findings***

Table 10.20 presents the mean scale scores on the index of unreflectiveness for male and female clergy separately and compares the scores with the norms provided in the test manual. These data demonstrate that men in the normal population record significantly higher on the scale of unreflectiveness than male clergy. Females in the normal population also record significantly higher on the scale of unreflectiveness than female clergy. Male clergy record significantly higher on the scale of unreflectiveness than female clergy. Men in the normal population record significantly higher on the scale of unreflectiveness than females in the normal population. These data show that men and women clergy are more reflective than men and women in the normal population and that male clergy are less reflective than female clergy.

Table 10.19 Unreflectiveness (practical/reflective) reliability analysis

	Item rest of scale correlation	
	Male	Female
Would you rather see a comedy than a documentary on TV?	0.1036	0.0257
Are you keen about learning things even though they may have no relevance to your everyday life?	0.3504	0.3496
Would you enjoy working on a project that involved a great deal of library research?	0.3882	0.3929
Are you so thoughtful and reflective that your friends sometimes call you a dreamer?	0.3317	0.2801
Do you often try to find the underlying motives for the actions of other people?	0.1964	0.2048
Do you frequently pause just to meditate about things in general?	0.3087	0.2830
Do you enjoy solving problems even though they have no practical application?	0.2480	0.2135
Are you bored by museums that feature archaeology and classical history?	0.3178	0.3356
Do you like work that involves action rather than profound thought and study?	0.4179	0.3987
Are you bored by discussions of what life might be like in the future?	0.2371	0.2579
Have you ever tried to write poetry?	0.2426	0.2631
Do you often philosophise about the purpose of human existence?	0.4812	0.4704
Do you frequently discuss the causes and possible solutions of social and political problems with your friends?	0.2860	0.3301
Do you think it is a waste of time to formulate plans for an ideal society or Utopia?	0.2395	0.2569
Are you frequently so lost in thought that you do not notice what is going on around you?	0.2496	0.3278
Are you overcome by a sense of wonder and excitement when you visit historical monuments?	0.3312	0.3397
Do you frequently become so involved with a question or you problem that have to keep thinking about it until you arrive at a solution?	0.2712	0.2034
If you have been to a play or film do you like to go over it in your mind for a long time afterwards?	0.2878	0.1902
Do you enjoy essays on serious philosophical subjects?	0.5213	0.5419
Do you often spend an evening just reading a book?	0.3543	0.3019
Alpha	0.7466	0.7357

Table 10.20 Mean scale scores (for men and women compared with population norms)

sex	clergy		norms	
	mean	sd	mean	sd
Male	17.92	7.39	20.28	7.27
Female	17.16	7.14	18.85	7.63

  

Male clergy/female clergy,	t = 1.970	p < .05
Male clergy/male norms,	t = 6.691	p < .001
Female clergy/female norms,	t = 3.935	p < .001
Male norms/female norms	t = 3.582	p < .001

Table 10.21 penetrates behind the overall mean scores recorded on the index of unreflectiveness to examine the percentage of male and female clergy who endorse the individual items. The data demonstrate that nearly three-quarters of male clergy are keen about learning things even though they may have no relevance for their daily life (72%). Around three fifths of male clergy have tried to write poetry (61%), frequently pause to meditate about things in general (58%) and frequently discuss the causes and possible solutions of social and political problems with friends (57%). Around a half of male clergy often philosophise about the purpose of human existence (50%), are overcome by a sense of wonder and excitement when they visit historical monuments (50%) and enjoy solving problems even though they have no practical application (54%).

On the other hand, nearly a half of male clergy would enjoy working on a project that involved a great deal of library research (47%), think that it is a waste of time to formulate plans for an ideal society or utopia (48%) and almost two-fifths of male clergy like work that involves action rather than profound thought and study (39%). Only a fifth

of male clergy felt that their friends often saw them as thoughtful and reflective (20%).

Table 10.21 Percentage endorsement of the twenty item of the index of unreflectiveness (practical/reflective) for male and female clergy

	Male %	Female %
Would you rather see a comedy than a documentary on TV?	36	28
Are you keen about learning things even though they may have no relevance to your everyday life?	72	75
Would you enjoy working on a project that involved a great deal of library research?	47	49
Are you so thoughtful and reflective that your friends sometimes call you a dreamer?	20	19
Do you often try to find the underlying motives for the actions of other people?	69	79
Do you frequently pause just to meditate about things in general?	58	66
Do you enjoy solving problems even though they have no practical application?	54	49
Are you bored by museums that feature archaeology and classical history?	26	30
Do you like work that involves action rather than profound thought and study?	39	29
Are you bored by discussions of what life might be like in the future?	25	25
Have you ever tried to write poetry?	61	72
Do you often philosophise about the purpose of human existence?	50	48
Do you frequently discuss the causes and possible solutions of social and political problems with your friends?	57	54
Do you think it is a waste of time to formulate plans for an ideal society or Utopia?	48	48
Are you frequently so lost in thought that you do not notice what is going on around you?	29	22
Are you overcome by a sense of wonder and excitement when you visit historical monuments?	50	51
Do you frequently become so involved with a question or problem that you have to keep thinking about it until you arrive at a solution?	45	48
If you have been to a play or film do you like to go over it in your mind for a long time afterwards?	37	42
Do you enjoy essays on serious philosophical subjects?	44	43
Do you often spend an evening just reading a book?	46	54

The data demonstrate that around three-quarters of female clergy are keen about learning things even though they may have no relevance for their daily life (75%) and have tried to write poetry (72%), Two-thirds of female clergy frequently pause to meditate about things in general (66%). Around a half of female clergy often philosophise about the purpose of human existence (48%), enjoy solving problems even though they have no practical application (49%), are overcome by a sense of wonder and excitement when they visit historical monuments (51%) and frequently discuss the causes and possible solutions of social and political problems with friends (54%).

On the other hand, nearly a half of female clergy would enjoy working on a project that involved a great deal of library research (49%), think that it is a waste of time to formulate plans for an ideal society or utopia (48%). Only a fifth of female clergy felt that their friends often saw them as thoughtful and reflective (19%) and slightly more of female clergy like work that involves action rather than profound thought and study (29%).

### ***Conclusions***

These data demonstrate that male and female clergy are more reflective than men and women in the normal population. This finding confirms the hypothesis and previous research that clergy are more reflective (Musson, 1998).

### **Summary**

The higher order dimension of psychoticism in the Eysenck Personality Profiler is made up of seven constructs, risk-taking (risk-taking/careful), impulsiveness (impulsive/controlled), irresponsibility (irresponsible/responsible), manipulation (manipulation/empathy), sensation-seeking (sensation-seeking/unadventurous), masculinity-femininity (toughminded/tenderminded), unreflectiveness (pastoral/reflective) the overall results reveal that in all seven scales the male and female clergy score significantly lower than men and women in the normal population on the dimension of psychoticism. These data demonstrate that male clergy display a characteristically feminine profile on six out of seven personality traits. In comparison with men in general they display lower levels of risk-taking, manipulation, sensation-seeking and masculinity (toughmindedness) and higher levels of responsibility and reflectiveness. On the other hand, male clergy do not record a characteristically feminine profile in terms of impulsiveness. These findings are consistent with previous research using Eysenck's model of three higher order factors of extraversion, neuroticism and psychoticism (Francis & Kay, 1995; Robbins, Francis, Haley & Kay, 2001).

These data demonstrate that female clergy display a more feminine profile on six out of seven personality traits. In comparison with women in general they display lower levels of risk-taking, manipulation, sensation seeking and masculinity (toughmindedness) and higher levels of responsibility and reflectiveness. On the other hand, female clergy do not record a characteristically feminine profile in terms of impulsiveness. The finding that female clergy score less on the dimensions of psychoticism than the normal population is not consistent with previous research (Francis, 1991; Francis, 1992).

These data also demonstrate that male clergy score significantly higher than female clergy on six out of the seven scales making up the higher order dimension of psychoticism. There is no significant difference between male and female clergy on the impulsive/controlled dimension. This finding that male clergy score significantly higher on the psychoticism scale is not supported by previous research. Francis (1992) found that female clergy had significantly higher psychoticism scores than male clergy and Robbins, Francis & Rutledge (1997) found no significant difference between male and female clergy on the psychoticism score.

The overall picture reveals clergy who demonstrate a preference for familiarity, safety and security, even if this means sacrificing some degree of excitement in life. The clergy reveal themselves as warm hearted, trusting, empathetic, straightforward and altruistic, perhaps even a little naive and gullible. They appear to have little need for excitement or adventure; instead they prefer the secure and familiar comforts of 'home'. They are people who get upset by bugs, blood and brutality, while they have a high interest in delicate matters such as romance, children, fine arts, flowers and clothes. They emerge as conscientious, reliable, trustworthy and serious-minded, possibly even a bit compulsive and are inclined to be interested in ideas, abstractions, philosophical questions, discussions, speculations, and knowledge 'for the sake of knowledge'.

# Conclusion and Recommendations

## Overview

This research project has set out to investigate the personality profile of male and female clergy ordained between 1992 and 1996 into the Anglican Church in England, Ireland, Scotland and Wales. The aim of this section is to draw together the empirical data presented in earlier chapters and to interpret these data for the life and ministry of the church. The results of the project will be presented first and then the results will be interpreted in the light of the 21 traits and the implications of these findings will be explored.

Table 1 sets out the comparison between the normative data for men and women on the three higher order factors of extraversion, neuroticism and psychoticism using the Eysenck Personality Profiler. On the extraversion scale, men in the normal population score higher than women in the normal population on five of the seven scales. Men in the normal population are: more sociable, more assertive, more achievement orientated, more dogmatic and more aggressive than women in the normal population and are more extraverted than the women. The women in the normal population, however, score significantly higher on the expressiveness scale than men in the normal population.

Table 1EPP norms for men and women

Personality trait	male		female		t	p<
	mean	sd	mean	sd		
<b><i>Neuroticism</i></b>						
Low self-esteem	8.76	7.69	12.06	9.11	7.31	.001
Unhappiness	7.51	7.81	9.31	8.92	4.01	.001
Anxiety	9.85	7.87	13.45	8.94	7.98	.001
Dependency	7.87	5.99	9.59	6.83	5.00	.001
Hypochondriasis	3.70	4.51	4.41	4.74	2.87	.01
Guilt	7.79	6.84	8.65	7.05	2.31	.05
Obsessiveness	12.04	6.57	12.90	6.41	2.47	.01
<b><i>Extraversion</i></b>						
Activity	26.91	7.21	26.54	7.43	0.94	NS
Sociability	27.74	8.02	27.01	7.94	1.71	.05
Expressiveness	17.21	6.05	18.74	6.22	4.66	.001
Assertiveness	24.32	6.90	22.41	7.38	4.99	.001
Achievement orientation	22.76	7.82	21.03	8.01	4.08	.001
Dogmatism	15.02	5.61	14.02	5.57	3.34	.001
Aggressiveness	14.22	6.73	12.00	6.36	6.33	.001
<b><i>Psychoticism</i></b>						
Risk taking	21.81	6.70	20.18	6.66	4.56	.001
Impulsiveness	18.61	7.45	20.15	7.52	3.84	.001
Irresponsibility	17.56	3.39	17.38	6.72	0.48	NS
Manipulation	18.11	6.84	14.82	5.91	9.61	.001
Sensation seeking	24.09	6.91	19.66	7.76	11.26	.001
Masculinity	25.07	5.57	13.58	5.05	40.35	.001
Unreflectiveness	20.28	7.27	18.85	7.63	3.58	.001

Table 2 EPP reliability and mean scores for male and female clergy

Personality trait	alpha	male clergy		alpha	female clergy		t	p<
		mean	sd		mean	sd		
<b><i>Neuroticism</i></b>								
Low self-esteem	0.8512	12.00	8.18	0.8551	14.37	8.54	5.416	.001
Unhappiness	0.8632	7.95	7.49	0.8559	8.15	7.31	0.510	NS
Anxiety	0.8341	11.82	7.82	0.8140	12.32	7.59	1.223	NS
Dependency	0.7177	8.55	5.54	0.6591	8.68	5.01	0.458	NS
Hypochondriasis	0.6354	3.88	3.81	0.6596	4.60	4.24	3.456	.001
Guilt	0.7639	10.49	6.32	0.7407	9.21	5.75	3.947	.001
Obsessiveness	0.7286	11.31	6.34	0.5884	10.43	5.15	2.783	.01
<b><i>Extraversion</i></b>								
Activity	0.7745	21.67	7.70	0.7819	21.84	7.84	0.416	NS
Sociability	0.8297	23.19	8.36	0.8026	21.62	7.78	3.567	.001
Expressiveness	0.5367	14.29	5.18	0.5063	13.21	4.77	4.050	.001
Assertiveness	0.7487	19.50	7.04	0.7470	17.83	6.86	4.532	.001
Achievement orientation	0.7577	16.49	7.00	0.7142	16.24	6.17	0.702	NS
Dogmatism	0.5862	15.88	5.43	0.5396	13.46	4.95	8.680	.001
Aggressiveness	0.6068	9.61	5.06	0.5795	7.02	4.24	10.189	.001
<b><i>Psychoticism</i></b>								
Risk taking	0.7198	16.81	6.73	0.6527	14.26	5.95	7.441	.001
Impulsiveness	0.7796	14.93	7.24	0.7510	14.69	6.82	0.640	NS
Irresponsibility	0.7167	15.72	6.54	0.6800	14.30	5.93	4.235	.001
Manipulation	0.5897	11.59	5.18	0.5209	8.94	4.32	10.195	.001
Sensation seeking	0.7763	16.82	7.51	0.7560	11.93	6.73	12.741	.001
Masculinity	0.4267	19.39	4.84	0.4505	12.42	4.45	27.983	.001
Unreflectiveness	0.7466	17.92	7.39	0.7357	17.16	7.14	1.970	.05

Table 3 EPP Reliability and mean norms for male clergy and the population norms

Personality trait	male clergy		male norms		t	p<
	mean	sd	mean	sd		
<i>Neuroticism</i>						
Low self-esteem	12.00	8.18	8.76	7.69	8.436	.001
Unhappiness	7.95	7.49	7.51	7.81	1.204	NS
Anxiety	11.82	7.82	9.85	7.87	5.234	.001
Dependency	8.55	5.54	7.87	5.99	2.478	.01
Hypochondriasis	3.88	3.81	3.70	4.51	0.917	NS
Guilt	10.49	6.32	7.79	6.84	8.622	.001
Obsessiveness	11.31	6.34	12.04	6.57	2.365	.01
<i>Extraversion</i>						
Activity	21.67	7.70	26.91	7.21	14.514	.001
Sociability	23.19	8.36	27.74	8.02	11.509	.001
Expressiveness	14.29	5.18	17.21	6.05	11.007	.001
Assertiveness	19.50	7.04	24.32	6.90	14.365	.001
Achievement orientation	16.49	7.00	22.76	7.82	17.837	.001
Dogmatism	15.88	5.43	15.02	5.61	3.257	.001
Aggressiveness	9.61	5.06	14.22	6.72	16.702	.001
<i>Psychoticism</i>						
Risk taking	16.81	6.73	21.81	6.70	15.498	.001
Impulsiveness	14.93	7.24	18.61	7.45	10.469	.001
Irresponsibility	15.72	6.54	17.56	7.39	6.887	.001
Manipulation	11.59	5.18	18.11	6.84	23.161	.001
Sensation seeking	16.82	7.51	24.09	6.92	20.770	.001
Masculinity	19.39	4.84	25.07	5.57	23.067	.001
Unreflectiveness	17.92	7.39	20.28	7.27	6.691	.001

Table 4 EPP norms for female clergy and the population norms

Personality trait	female clergy		female norms		t	p<
	mean	sd	mean	sd		
<i>Neuroticism</i>						
Low self-esteem	14.37	8.54	12.06	9.11	4.502	.001
Unhappiness	8.15	7.31	9.31	8.92	2.425	.01
Anxiety	12.32	7.59	13.45	8.94	2.329	.01
Dependency	8.68	5.01	9.59	6.83	2.572	.01
Hypochondriasis	4.60	4.24	4.41	4.74	0.725	NS
Guilt	9.21	5.75	8.65	7.05	1.484	NS
Obsessiveness	10.43	5.15	12.90	6.41	7.233	.001
<i>Extraversion</i>						
Activity	21.84	7.84	26.54	7.43	12.732	.001
Sociability	21.62	7.78	27.01	7.94	11.836	.001
Expressiveness	13.21	4.77	18.74	6.22	16.935	.001
Assertiveness	17.83	6.86	22.41	7.38	11.054	.001
Achievement orientation	16.24	6.17	21.03	8.01	11.376	.001
Dogmatism	13.46	4.95	14.02	5.57	1.822	.05
Aggressiveness	7.02	4.24	12.00	6.36	15.506	.001
<i>Psychoticism</i>						
Risk taking	14.26	5.95	20.18	6.66	16.076	.001
Impulsiveness	14.69	6.82	20.15	7.52	13.057	.001
Irresponsibility	14.30	5.93	17.38	6.72	8.327	.001
Manipulation	8.94	4.32	14.82	5.91	19.223	.001
Sensation seeking	11.93	6.73	19.66	7.76	18.213	.001
Masculinity	12.42	4.45	13.58	5.05	4.176	.001
Unreflectiveness	17.17	7.14	18.85	7.63	3.935	.001

Table 2 sets out the comparison between male and female clergy. The data reveals that the male clergy score significantly higher on five out of the seven scales making up the higher order of extraversion. Male clergy are more sociable, more expressive, more assertive, more dogmatic and more aggressive than the female clergy. There is no significant difference between male and female clergy on scale of activity and achievement orientation.

Table 3 sets out the comparison between male clergy and men in the normal population. The data reveal that men in the normal population score significantly higher than male clergy on six of the seven scales making up the higher order dimension of extraversion. Men in the normal population are: more active, more sociable, more expressive, more assertive, more achievement orientated and more aggressive than male clergy. The male clergy are, however, more dogmatic.

Table 4 sets out the comparison between female clergy and women in the normal population. The data reveal that women in the normal population score significantly higher than female clergy on all seven scales making up the higher order dimension of extraversion. Women in the normal population are: more active, more sociable, more expressive, more assertive, more achievement orientated, more dogmatic and more aggressive than female clergy.

Table 1 sets out the comparison between the normative data for men and women on the higher order factor of neuroticism. On the neuroticism scale, women in the normal

population score significantly higher on all of the seven scales. Women in the normal population have lower self-esteem, are unhappier, more anxious, more dependent, more hypochondriachal, more guilty and more obsessive than men in the normal population.

Table 2 sets out the comparison between male and female clergy on the dimension of neuroticism. The data reveal that the female clergy score significantly higher on two out of the seven scales making up the higher order of neuroticism. The female clergy have lower self-esteem and are more hypochondriachal than the male clergy. There is no significant difference between male and female clergy on the scales of unhappiness, anxiety and dependency. The male clergy score significantly higher on the guilt and obsessive scale compared with female clergy.

Table 3 sets out the comparison between male clergy and men in the normal population. The data reveal that male clergy score significantly higher than men in the normal population on four out of the seven scales making up the higher order dimension of neuroticism. The male clergy have lower self-esteem, are more anxious, more dependent and more guilty than men in the normal population. There is no significant difference between male clergy and the population norms on the scales of unhappiness and hypochondriasis. The men in the normal population score significantly higher on the obsessiveness scale.

Table 4 sets out the comparison between female clergy and women in the normal population. The data reveal that women in the normal population score significantly

higher than female clergy on four of the seven scales making up the higher order dimension of neuroticism. Women in the normal population are: unhappier, more anxious, more dependent and more obsessive than the female clergy. There is no significant difference between the female population norms and the female clergy on the scale of hypochondriasis and guilt. The female clergy score significantly higher on the scale of low self-esteem than females in the normal population.

Table 1 sets out the comparison between the normative data for men and women on the higher order factor of psychoticism. On the psychoticism scale, men in the normal population score higher than women in the normal population on five of the seven scales. Men in the normal population are: greater risk-takers, manipulators, sensation seekers and are more masculine and practical than women in the normal population. There is no significant difference between men and women in the normal population on the scale of irresponsibility. Women in the normal population score significantly higher on the scale of impulsivity than men in the normal population.

Table 2 sets out the comparison between male and female clergy. The data reveal that the male clergy score significantly higher on six out of the seven scales making up the higher order of psychoticism. Male clergy are higher risk-takers, more irresponsible, greater manipulators, higher sensation seekers, more masculine and more practical than their female colleagues. There is no significant difference between males and females on the scale of impulsivity.

Table 3 sets out the comparison between male clergy and men in the normal population. The data reveal that men in the normal population score significantly higher than male clergy on all of the seven scales making up the higher order dimension of psychoticism. Men in the normal population are: greater risk-takers, more impulsive, more irresponsible, greater manipulators, higher sensation seekers, more masculine and more practical than the male clergy.

Table 4 sets out the comparison between female clergy and women in the normal population. The data reveal that women in the normal population score significantly higher than female clergy on all seven scales making up the higher order dimension of psychoticism. Women in the normal population are: greater risk-takers, more impulsive, more irresponsible, greater manipulators, higher sensation seekers, more masculine and more practical than the female clergy.

The overall results show that both male and female clergy have very different personality profiles compared with men and women in the normal population. This finding raises questions about the nature of the church and the people who work within the structure of the church. On the three higher order dimensions of extraversion, neuroticism and psychoticism the male clergy, on balance, appear less extraverted, more neurotic and less toughminded than men in general. The women clergy also appear less extraverted, more neurotic and less toughminded than women in general. The issues this raises for the church include the style and presentation of the worship of the church, the mission and evangelism of the church and the selection and training of clergy.

Each of these issues will now be discussed using Eysenck and Wilson's (1976) understanding of the 21 traits within the three higher order dimensions of personality.

## **Neuroticism**

*Low self-esteem (inferiority/self-esteem)* People who score high on this scale have a low opinion of themselves, believing that they are unattractive failures. An extreme high score may be thought of as approximating to the celebrated 'inferiority complex'. People who score low on this scale tend to have plenty of confidence in themselves and their abilities. They think of themselves as worthy, useful human beings, and believe that they are well-liked by other people. Without necessarily implying cockiness or conceit it could be said that they like themselves a lot. Male and female clergy record higher scores than men and women in general on this factor. This personality style may help clergy to get alongside and appreciate the detrimental effect of low self-esteem in the lives of others but low-self esteem does not help clergy to carry out a wide range of professional duties with confidence and assurance. In the past the church has not helped people to be confident and self-assured as it has stressed the unworthiness of self, but if the church is to reach all people it needs to strike a balance between unworthiness and worth. The clergy score higher on low self-esteem than men and women in general and the lack of confidence and assurance displayed by the clergy may not help those seeking support from the clergy. When selecting and training clergy it is important to stress the positive as well as the negative so that clergy do not appear over confident and self-assured or lacking in confidence or self-assurance.

***Unhappiness (unhappy/happy)*** High scorers on this scale are characteristically pessimistic, gloomy and depressed, disappointed with their existence and at odds with the world. Low scorers on this scale are generally cheerful, optimistic and well. They are satisfied with their existence, find life rewarding, and are at peace with the world. Male clergy do not record scores significantly different from men in general on this factor. They are neither more nor less happy. This finding provides no support for the view that the clerical profession is under particular pressure or strain which detracts from personal happiness. On the other hand, it provides no support for the view that the professionally religious have found the key to personal happiness. If male clergy are neither more nor less happy, the general population may find it difficult to understand the purpose of Christianity and its liturgy and worship if they do not see the clergy as being positive and optimistic. A lack of optimism and happiness in clergy may cause clergy to be influenced by the unhappiness and depression of those around them and may cause them stress. The female clergy, however, appear happier than women in general and may well have found the key to personal happiness.

***Anxiety (anxious/calm)*** High scorers on this scale are easily upset by things that go wrong and are inclined to worry unnecessarily about things that may or may not happen. Such people account for a high proportion of the consumption of tranquillizers. Low scorers on this scale are placid, serene and resistant to irrational fears and anxieties. Male clergy record higher scores than men in general on this factor. This personality style may

be consistent with the heightened awareness of the human condition associated with religious sensibilities. On the other hand, it may mean that male clergy are particularly vulnerable to being worn down by the problems and anxieties encountered by their ministry. Male clergy do not set a good example to the general population if they portray themselves as anxious especially when the Christian message is about trusting in God. Female clergy, however, appear less anxious and appear more serene than the normal population of women, which is more in keeping with the Christian message. Clergy must learn to put their trust in the God about whom they preach and less trust in themselves if they are to attract people to a church that is serene and peaceful.

***Dependency (dependence/autonomy)*** High scorers on this scale lack self-reliance, think of themselves as a helpless pawns of fate, are pushed around by other people and events, and show a high degree of what has been called 'authoritarian submission' - the unquestioning obedience to institutional power. The autonomous person (low scorer on this scale) enjoys a great deal of freedom and independence, makes his or her own decisions, views themselves as sharing of their own fate and take realistic action to solve problems. Male clergy record higher scores than men in general on this factor. This personality style may be consistent with obedience to Church teaching and to a hierarchical Church structure. On the other hand, it may mean that male clergy may be particularly susceptible to being pushed around by powerful lay people within their churches and by powerful factions within local politics. Male clergy appear as people not able to make their own decisions and people who are dependent on instruction and plans from the hierarchy of the church this profile is not helpful in a world that puts much

emphasis on the autonomy and independence of people. How then can the church realistically face and engage with the world at large if it shows a profile of its male clergy that is different to the personality profile of people in the wider population. Female clergy, are however, less dependent than the women in the normal population and this may well be because of the fight they have undergone to become priests. Female priests have had to be independent and mistresses of their own fate.

***Hypochondriasis (hypochondria/sense of health)*** Hypochondriasis measures a tendency to acquire psychosomatic symptoms and imagine that one is ill. High scorers on this scale complain of a wide variety of diffuse physical symptoms, show a great deal of concern about their state of health, and frequently demand the sympathetic attention of their doctor and their family and friends. Low scorers on this scale are very seldom ill and do not worry very much about their health. It is just possible that a high score on this scale could be obtained by an individual who is genuinely very sick physically, but the variety of symptoms sampled makes this extremely unlikely. Male and female clergy do not record scores significantly different from men and women in general on this factor. On the one hand, this finding provides no support for the view that the clerical profession provides a particularly salutary or healthy lifestyle. On the other hand, it provides no support for the view that the pressures of the clerical role in contemporary society lead to the sense of failing health. Since the Gospel's emphasis is on healing and wholeness, one would have expected that the clergy would have scored lower on this dimension if they are living the Gospel message. How can a church that puts emphasis on healing and wholeness realistically face a world in which there is much suffering and ill health if its

clergy do not hold a positive sense of health?

***Guilt (guilt/guilt-freedom)*** High scorers on this scale are self-blaming, self-abasing and troubled by their conscience regardless of whether or not their behaviour is really morally reprehensible. Low scorers on this scale are little inclined to punish themselves or regret their past behaviour. A certain level of guilt may be appropriate for people (indeed its complete absence is symptomatic of psychopathy) but excessive self-recrimination is usually regarded as a neurotic characteristic. Male clergy record higher scores than men in general on this factor. This personality style may be consistent with an emphasis in Church teaching on human unworthiness and sin. On the other hand, it may render male clergy particularly vulnerable to exploitation by people who are able to play on their feelings of guilt. A church which emphasises the guilt of people fails to accept people for who they are. This survey shows men in the normal population to be less guilty than the male clergy and maybe they feel little need for a church that emphasises the guilt of people. The women in the normal population show higher levels of guilt than the female clergy and this may go some way to explain why there are more women than men in the congregations of churches, especially when the cleric is male. Care needs to be taken to attract male clergy who are less guilty into the profession.

***Obsessiveness (obsessive/casual)*** High scorers on this scale are careful, conscientious, highly disciplined, staid, finicky, and easily irritated by things that are unclean, untidy or out of place. Low scorers on this scale are casual and easy-going with

less need for order, routine or ritual. Again, the questions are selected to cover a normal range, so the scale cannot really be used to diagnose an obsessive-compulsive neurosis. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the lives of men who are expected to live without the regular rhythm of going to a place of work outside the home and who are expected to be responsive to an ever-changing pattern of demands on their time. On the other hand, such men may come to find as irksome the need for order, routine and ritual as expressed through the daily pattern of morning and evening prayer and the Sunday liturgy. The clergy may appear as casual and easy-going which can be interpreted as being too casual and not conscientious about the work of the church. If the mission of the church is to be developed perhaps there is need for clergy who appear more careful and conscientious about its life and witness. When selecting and training clergy, care should be taken to get a balance between clergy who are conscientious and also clergy who are easy-going.

## **Extraversion**

*Active (active/inactive)* People scoring high on this scale are generally active and energetic. They enjoy all kinds of physical activity including hard work and exercise. They tend to wake early and quickly in the morning, move rapidly from one activity to another, and pursue a wide variety of different interests. People with low scores on this scale are inclined to be physically inactive, lethargic and easily tired. They move about the world at a leisurely pace and prefer quiet restful holidays. Male and female clergy

record lower scores than men and women in general on this factor. This personality style may be consistent with the measured presentation of Anglican liturgy and worship and be suitable for those already attending an Anglican place of worship but how does the liturgy and worship of the church attract men and women in the normal population who would prefer a more 'active' form of worship, a style of worship that may move from one part of the service to the next quickly, with plenty of variety, and with more congregational participation. In terms of missionary opportunities the inactivity of the clergy may distance male and female clergy from many of the leisure pursuits through which they could get alongside the large body of unchurched men and women. One issue facing the church is the problem of Sunday worship. If people in general are more active than the clergy then they may well choose to pursue their leisure activities on a Sunday rather than attend a church that fails to satisfy their need for variety and activity. In terms of clergy selection and training, the church may wish to look at the type of people it selects for ministry and reassess its strategies in order to attract those men and women who could stand alongside men and women in the normal population.

***Sociability (sociable/unsociable)*** High scorers on this scale seek out the company of other people, they like social functions such as parties and dances, they meet people easily and are generally happy and comfortable in sociable situations. Low scorers on this scale, by contrast, prefer to have only a few special friends, enjoy solo activities such as reading, have difficulty finding things to talk about to other people, and are inclined to withdraw from oppressive social contacts. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent

with the life of prayer, meditation and private study promoted by aspects of the Anglican tradition, but how does it cater for those men and women in general who prefer open discussion, face to face contact with other people and open prayer? How welcoming is this personality style to men and women who look for social activities within the church, who look for God in the other person and who need a more socially based faith? The data show that the male female clergy are less sociable people than men and women in the normal population. This may well generate considerable pressures and tensions among male and female clergy committed to fulfilling the many and varied social expectations associated with the clerical profession. When selecting and training people for ministry care should be taken to prepare people for the many demanding social activities associated with ministry, but care should also be taken to select those who are at ease in social situations.

***Expressiveness (expressive/inhibited)*** This refers to a general tendency to display one's emotions outwardly and openly, whether sorrow, anger, fear, love or hate. High scorers on this scale tend to be sentimental, sympathetic, volatile and demonstrative. Low scorers on this scale are reserved, even-tempered, cool, detached, and generally controlled as regards the expression of their thoughts and feelings. This factor, taken to an extreme, refers to behaviour that is classically called 'hysterical', therefore it will come as no surprise that, even though it is primarily a component of extraversion, it is also tilted slightly in the direction of emotional instability. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the even-tempered approach to life associated with the qualities of

acceptance and tolerance promoted by the Christian tradition but it may mean that male and female clergy project the image of being too cool, detached and reserved to engage in a social way with the issues that really matter. In the liturgy and worship of the Anglican Church there is very little emphasis on showing emotion, for many people outside of the church the worship of the church may appear reserved, cool and lacking in any emotion of joy or sorrow. The cool and detached nature of the clergy may well stop men and women in the normal population engaging in any real way with the clergy, they may feel that because of the lack of any emotion, clergy are not living in the 'real world.' When selecting and training clergy, attention needs to be given to the advantages of sharing and expressing emotions.

***Assertiveness (assertive/submissive)*** High scorers on this scale have what is sometimes called a 'strong personality'; they are independent, dominant, and stand up for their rights, perhaps to the extent of being viewed as 'pushy'. Low scorers on this scale are humble, timid, submissive, disinclined to take any initiative in an interpersonal situation, and may be easily imposed upon. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the Christian message of humility and gentleness but does little to help promote independence and new initiatives. The worship and liturgy of the church has over the years encouraged people to be submissive and dependent on the cleric without emphasising the gifts of the people. The general population score higher on this dimension and therefore appear more independent and assertive. How well would they fit into a church whose liturgy, worship and church structures encourage people to be

submissive and dependent? When selecting and training clergy it is important to select clergy who are independent and assertive in order that they may encourage people to be part of the church. Care also has to be taken with clergy already in post as lower assertiveness scores may mean that male and female clergy are particularly vulnerable to the unreasonable demands imposed upon them by others.

***Achievement orientation (ambitious/unambitious)*** High scorers on this scale are ambitious, hard-working, competitive, keen to improve their social standing, and place a high value on productivity and creativity. Low scorers on this scale place little value on competitive performance or creative output. Many are also apathetic, retiring and aimless, but these are not invariable characteristics of the person without strong achievement motivation. Male and female clergy also record lower scores than men and women in general on this factor. This personality style may be consistent with the view of the clerical profession as a vocation within which there is room for neither personal ambition or interpersonal competitiveness but how do the clergy face and speak to a society that puts much emphasis on achievement and status? The church also faces the problem of how they are to meet quite proper and realistic goals if the clergy lack drive. Selection and training of clergy should encourage those with a high value on productivity and creativity to achieve their goals.

***Dogmatism (dogmatic/flexible)*** High scorers on this scale have set, uncompromising views on most matters, and they are likely to defend them vigorously

and vociferously. Low scorers on this scale are less rigid and less likely to see things in black and white; they are open to rational persuasion and very tolerant of uncertainty. Male clergy record higher scores than men in general on this factor. This personality style may be consistent with the clear commitment to certain beliefs and values which are seen as the proper prerequisites to ordination within the Anglican Church. On the other hand, a tendency toward rigidity and closed-mindedness may prevent some male clergy from seeing alternative points of view and close down rather than open up dialogue with unbelievers. The church if it is seen as too rigid will fail to attract those people who are searching for a faith and will not be open to new ideas and new ways of expressing the faith. When selecting and training people for ministry care needs to be taken so that those who hold clear dogmatic views are not put in training situations that emphasise and feed their dogmatic tendencies, as sense of openness and flexibility should be encouraged.

The female clergy are less dogmatic than women in general and while they may be more open to others and more tolerant of uncertainty they need to be aware of those who hold more rigid views. Theological colleges may well cause clergy to become more rigid and less open especially those colleges which have a clear understanding of the tradition they are handing on. Care needs to be taken when selecting people for ministry that the dogmatic type is not the only type that is chosen.

***Aggressiveness (aggressive/peaceful)*** High scorers on this scale are given to the direct or indirect expression of aggression, for example through behaviours such as temper tantrums, fighting, violent argument and sarcasm. They take no nonsense from

anyone and feel compelled to return fire or 'get back' at anyone who transgresses against them. Low scorers on this scale are gentle, even-tempered, prefer to avoid personal conflict, and are not given to violence either physical or indirect. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the quality of life promoted by Jesus' teaching through the Beatitudes in the Sermon on the Mount. On the other hand, it may predispose male and female clergy toward trying to avoid conflict rather than toward handling conflict creatively. Those men and women in the normal population who score higher on aggressiveness may find the church to be too 'nice' and too 'gentle' and therefore alien to their way of life. The church needs to encourage men and women who have a more aggressive personality to attend church and to minister in churches in order to help the church deal with the many conflicts it faces and in order that it may be a church that represents all people.

## **Psychoticism**

***Risk-taking (risk-taking/careful)*** High scorers on this scale like to live dangerously and seek rewards with little concern of the possible adverse consequences. Characteristically, they are gamblers who believe that 'an element of risk adds spice to life'. Low scorers on this scale indicate a preference for familiarity, safety and security, even if this means sacrificing some degree of excitement in life. Male and female clergy record lower scores than men and women in general on this factor. This personality profile may be consistent with the lives of men who have been trained to accept and

project a responsible role model. On the other hand, sacrificing some of the excitement in life may lead to an unnecessarily dull and arid existence which in turn may fail to inspire others to follow that role model. The church is seen as dull and arid by many people, while many television programmes about clergy portray them as lacking in fun and excitement. The church needs to take more risks if it is to grow. It needs to step out and do fun and exciting things if it is to attract people from the normal population. Those churches that take the risk in finding new ways of being church may well attract more people from the normal population. Care needs to be taken in training and selecting clergy so that some risk-takers find their place in the church.

***Impulsiveness (impulsive/controlled)*** High scorers on this scale are inclined to act on the spur of the moment, make hurried, often premature, decisions, and are usually carefree, changeable and unpredictable. Low scorers on this scale consider matters very carefully before making a decision. They are systematic, orderly, cautious, and plan their life out in advance; they think before they speak, and 'look before they leap'. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the sense of acting within the perspective of eternal realities communicated by the Christian tradition. On the other hand, some male clergy may become the victims of extreme caution and indecisiveness. A church that lacks impulsiveness and spontaneity may well be seen as a boring and dull place. If the clergy plan their life in a cautious manner they will not be open to the spontaneous and impulsive nature of the world around them. They may find it difficult to respond to the needs of the moment and may be seen as an institution that is irrelevant. Care should be

taken to select and train people for the different and varying situations that the church can find itself in so that it responds to the needs of the moment.

***Irresponsibility (irresponsible/responsible)*** High scorers on this scale are inclined to be casual, careless of protocol, late with commitments, unpredictable, and perhaps socially irresponsible. All this is within the normal range however, so no implication of psychopathy or delinquency is intended even for rock-bottom scores. While it may be true to say that psychopaths and criminals are generally irresponsible, the converse is by no means certain; many people are high on this factor without having the slightest criminal inclination. People who score low on this scale are likely to be conscientious, reliable, trustworthy and serious-minded, possibly even a little bit compulsive. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the calling of clergy to offer a reliable, trustworthy and serious-minded pattern of leadership. On the other hand, when the changing demands of the job make it difficult or impossible for male and female clergy to maintain the standards of responsibility which they have set for themselves, this personality style may lead to profound frustration and personal dissatisfaction.

***Manipulation (manipulation/empathy)*** High scorers on this scale are detached, calculating, shrewd, worldly, expedient, and self-interested in their dealings with other people. Low scorers on this scale are warm-hearted, trusting, empathetic, straightforward and altruistic, perhaps also a little naive and gullible. This trait is sometimes called

Machiavellianism because it corresponds to some extent with the political philosophy expounded by the Italian writer Niccolo Machiavelli. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the empathic qualities associated with pastoral ministry. On the other hand, it may render male and female clergy vulnerable to being naive and gullible in some situations and detract from their ability to think and act strategically in human situations. Clergy score lower than the normal population and may well be seen as people who are empathetic trusting and warm-hearted and may well attract people from the normal population who hold these qualities into the church, but the church also needs people both in ordained and lay ministry who are shrewd, worldly and detached in order to make the difficult decisions. It is important to train and select people with both of these qualities.

***Sensation Seeking (sensation seeking/unadventurous)*** High scorers on this scale are forever seeking thrills in life; they have an insatiable thirst for novel experiences and require regular ‘jags’ in order to stave off boredom. To this end they will accept a moderate level of danger to life and limb. Low scorers on this scale have little need for excitement or adventure; instead they prefer the secure and familiar comforts of ‘home’. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the ordered lifestyle and pattern of worship promoted by the Anglican ordination services. On the other hand, too much attachment to the familiar environment which generates its own security may make male clergy reluctant to explore new experiences and new ways of celebrating and

communicating their faith. The services of the church are boring and fail to meet the needs of the vast majority of the population. Selecting and training people who prefer the 'familiar comforts of home' instead of those who search for novel experiences will see a church that keeps the *status quo* but does not grow. Care needs to be taken to select men and women who have the personality traits of sensation seeking to attract those men and women who are looking for the novel experience rather than the dull 'comforts of home.'

***Masculinity-Femininity (tough minded/tender minded)*** People scoring high on this scale are unconcerned about crawling insects, the sight of blood and other gruesome spectacles; they are tolerant of, and probably enjoy, violence, obscenity and swearing, they are disinclined to show weakness or sentimentality of any kind, for example by crying or expressing love, and rely on reason rather than intuition. Low scorers on this scale are easily upset by bugs, blood and brutality, while they have a high interest in delicate matters such as romance, children, fine arts, flowers and clothes. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the Anglican church's commitment to fine architecture, music and vestments. On the other hand, a church which is so committed to the cultural expressions of femininity may have increasing difficulty in communicating with the masculine world of men. For many years Christianity and churchgoing have been seen as feminine pursuits, the church now has to face the problem of selecting more toughminded people so that it can stand alongside the toughminded men and the toughminded women in our society.

***Unreflectiveness (practical/reflective)*** High scorers on this scale have a practical bent, are interested in doing things rather than thinking about them, and tend to be impatient with 'ivory tower' theorising. Low scorers on this scale are inclined to be interested in ideas, abstractions, philosophical questions, discussions, speculations, and knowledge 'for the sake of knowledge'; that is, they are generally thoughtful (in the literal sense of the term) and introspective. Male and female clergy record lower scores than men and women in general on this factor. This personality style may be consistent with the way in which clergy are trained in the skills of theology. On the other hand, male clergy who remain content working within the ivory tower of theology may fail to root the gospel within the practical concerns of the society that they are committed to serve. A church which continually reflects about its situation will be seen as irrelevant to the general population who wish to see faith put into action. Clergy who continue to look for the bigger picture may find it difficult to relate to the men and women in the normal population. Care needs to be taken to emphasise the importance of practice alongside the theory of theology.

### ***Conclusion***

The psychological profile of the 'typical' male and female Anglican cleric has identified a range of potential strengths and weaknesses which can be identified in the ministry preferences of many clergy. Such data should be of practical relevance in shaping the expectations which it is reasonable to hold of the 'typical' male and female Anglican cleric and in identifying the areas most in need of addressing through continuing

ministerial education and professional development.

Against this profile of the 'typical' male and female Anglican cleric data on individual clergy could now be profitably employed in order to ensure more careful matching between the skills of individual clergy and the requirements of specific appointments. Taken seriously such profiling could reduce clergy stress and burnout and alleviate some of the wastage brought about by stress related illness and early retirement. The church can benefit from profiling the typical male and female cleric in order to see the type of people that make up the ordained ministry of the church and discover the differences between the normal population and male and female clergy in order to think of its mission and evangelism. It would also be interesting to profile congregations to see if they hold the same profile as the clergy which in turn could give a profile of religious people in general.

It is clear from this study that the clergy are different from the normal population. What we do not know as yet is whether the clergy differ from the church members from which they are selected and appointed to serve, or whether church members and congregations also differ from the normal population in the same ways as the clergy. Further cross-sectional research of church congregations and church members is now required to answer this question.

# References

- Allen, R.O. and Spilka, B. (1967), Committed and consensual religion: a specification of religion-prejudice relationships, *Journal for the Scientific Study of Religion*, 6, 191-206.
- Allport, G.W. and Ross, J.M. (1967), Personal religious orientation and prejudice, *Journal of Personality and Social Psychology*, 5, 432-443.
- Allport, G.W., Vernon, P. and Lindzey, G. (1960), *A Study of Values*, Boston, Massachusetts, Houghton Mifflin.
- Altemeyer, B. and Hunsberger, B. (1992), Authoritarianism, religious fundamentalism, quest and prejudice, *International Journal for the Psychology of Religion*, 2, 113-133.
- Apostal, R.A. and Ditzler, J.R. (1971), Dogmatism and attitudes towards religious change, *Sociological Analysis*, 32, 180-183.
- Argyle, M. (1958), *Religious Behaviour*, London, Routledge and Kegan Paul.
- Argyle, M. (1987), *The Psychology of Happiness*, London, Routledge and Kegan Paul.
- Argyle, M. and Beit-Hallahmi, B. (1975), *The Social Psychology of Religion*, London, Routledge and Kegan Paul.
- Argyle, M. and Crossland, J. (1987), Dimensions of positive emotions, *British Journal of Social Psychology*, 26, 127-137.
- Argyle, M. and Delin, P. (1965), Non-universal laws of socialisation, *Human Relations*, 18, 77-86.
- Argyle, M. and Lu, L. (1990a), The happiness of extraverts, *Personality and Individual Differences*, 11, 1011-1017.
- Argyle, M. and Lu, L. (1990b), Happiness and social skills, *Personality and Individual Differences*, 11, 1255-1261.
- Argyle, M., Martin, M. and Crossland, J. (1989), Happiness as a function of personality and social encounters, in J.P. Forgas and J.M. Innes (eds), *Recent Advances in Social*

*Psychology: an international perspective*, pp. 189-203, North Holland, Elsevier Science Publishers.

Argyle, M., Martin, M. and Lu, L. (1995), Testing for stress and happiness: the role of social and cognitive factors, in C.D. Spielberger and J. Brebner (eds), *Testing for Stress and Happiness: the role of social factors*, pp.173-187, New York, Taylor and Francis.

Averill, R.B. (1994), In the eyes of the beholder in P. Ekman and R.J. Davidson (eds), *The Nature of Emotion: fundamental questions*, New York, Oxford University Press.

Aycock, D.W. and Noaker, S. (1985), A comparison of the self-esteem levels in evangelical Christian and general populations, *Journal of Psychology and Theology*, 13, 199-208.

Baddeley, A. (1968), A three minute reasoning test based on grammatical transformations, *Psychonomic Science*, 10, 341-342.

Bahr, H.M. and Martin, T.K. (1983), 'And thy neighbour as thy self': self-esteem and faith in people as correlates of religiosity and family solidarity among Middletown high school students, *Journal for the Scientific Study of Religion*, 22, 132-144.

Baker, M. and Gorsuch, R. (1982), Trait anxiety and intrinsic-extrinsic religiousness, *Journal for the Scientific Study of Religion*, 21, 119-122.

Balswick, J.O. and Balkwell, J.W. (1978), Religious orthodoxy and emotionaliry, *Review of Religious Research*, 19, 308-319.

Barratt, E.S. (1959), Anxiety and impulsiveness related to psychomotor efficiency, *Perceptual and Motor Skills*, 9, 191-198.

Barratt, E.S. (1965), Factor analysis of some psychometric measures of impulsiveness and anxiety, *Psychological Reports*, 16, 547-554.

Barton, K. and Vaughan, G.M. (1976), Church membership and personality a longitudinal study, *Social Behavior and Personality*, 4, 11-16.

Batson, C.D. (1976), Religion as prosocial: agent or double agent, *Journal for the Scientific Study of Religion*, 15, 29-45.

Batson, C.D. (1983), Sociobiology and the role of religion in promoting prosocial behavior: an alternative view, *Journal of Personality and Social Psychology*, 45, 1380-1385.

Batson, C.D., Schoenrade, P. and Ventis, W.L. (1993), *Religion and the Individual: a social-psychological perspective*, Oxford, Oxford University Press.

- Batson, C.D. and Ventis, W.L. (1982), *The Religious Experience: a social psychological perspective*, New York, Oxford University Press.
- Baumeister, R. F. (1997), Identity, self-concept, and self-esteem: the self lost and found in R. Hogan, J. Johnson, and S. Briggs (eds), *The Handbook of Personality Psychology*, pp. 681-710, London, Academic Press.
- Beck, T., Ward, C.H., Mendelson, M., Mock, J. and Erbaugh, J. (1961), An inventory for measuring depression, *Archives of General Psychiatry*, 7, 15-216.
- Beit-Hallahmi, B. and Argyle, M. (1997), *The Psychology of Religious Behaviour, Belief and Experience*, London, Routledge and Kegan Paul.
- Beit-Hallahmi, B. and Nevo, B. (1987), Jews in Israel: the dynamics of an identity change, *International Journal of Psychology*, 22, 75-81.
- Bell, H.M. (1934), *The Adjustment Inventory*, California, Stanford University Press.
- Bem, S. L. (1974), The measurement of psychological androgyny, *Journal of Consulting and Clinical Psychology*, 42, 155, 162.
- Bem, S.L. (1981), *Bem Sex Role Inventory: professional manual*, Palo Alto, California, Consulting Psychological Press.
- Bendig, A.W. (1962), Factor analysis of the Guilford Zimmerman Temperament Survey and the Maudsley Personality Inventory, *The Journal of General Psychology*, 67, 21-26.
- Bendig, A.W. (1963), The relation of temperament traits of social extraversion and emotionality to vocational interests, *Journal of General Psychology*, 69, 311-318.
- Bergin, A.E., Masters, K.S. and Richards, P.S. (1987), Religiousness and mental health reconsidered: a study of an intrinsically religious sample, *Journal of Counselling Psychology*, 34, 197-204.
- Berkel, J. and deWaard, F. (1983), Mortality pattern and life expectancy of Seventh-Day Adventists in the Netherlands, *International Journal of Epidemiology*, 12, 455-459.
- Billiet, J.B. (1995), Church involvement, individualism, and ethnic prejudice among Flemish Roman Catholics: new evidence of a moderating effect, *Journal for the Scientific Study of Religion*, 34, 224-233.
- Bishop, D.V.M. (1977), The P scale and psychosis, *Journal of Abnormal Psychology*, 86, 127-134.
- Blazer, D. and Palmore, E. (1976), Religion and aging in a longitudinal panel, *The Gerontologist*, 16, 82-85.

- Block, J. (1977a), P scale and psychosis: continued concerns, *Journal of Abnormal Psychology*, 86, 431-434.
- Block, J. (1977b), The Eysencks and psychoticism, *Journal of Abnormal Psychology*, 86, 653-654.
- Bohr, R.H. (1968), Dogmatism and age of vocational choice in two religious orders. *Journal for the Scientific Study of Religion*, 7, 282-283.
- Bolardos, A.C. (1964), Validation of the Maudsley Personality Inventory in Chile, *British Journal of Social and Clinical Psychology*, 3, 148.
- Bouma, G.D. (1973), Beyond Lenski: a critical review of recent 'protestant ethic' research, *Journal for the Scientific Study of Religion*, 12, 141-155.
- Braam, A.W., Beekman, A.T.F., Knipscheer, C.P.M., Deeg, D.J.H., van den Eden, P. and van Tilburg, W. (1998), Religious denomination and depression in older Dutch citizens: patterns and models, *Journal of Aging and Health*, 10, 483.
- Braam, A.W., Beekman, A.T.F., van Tilburg, T.G. Deeg, D.J.H. and van Tilburg, W. (1998), Religious involvement and depression in older Dutch citizens, *Social Psychiatry Epidemiol*, 32, 284-291.
- Bradburn, N.M. (1969), *The Structure of Psychological Well-being*, Chicago, Illinois Aldine.
- Braithwaite, V.A. and Law, H. (1985), Structure of human values: testing the adequacy of the Rokeach value survey, *Journal of Personality and Social Psychology*, 49, 250-263.
- Brebner, J., Donaldson, J., Kirby, N. and Ward, L. (1995), Relationships between happiness and personality, *Personality and Individual Differences*, 19, 251-258.
- Brown, L.B. (1962), A study of religious belief, *British Journal of Psychology*, 53, 259-272.
- Brownfain, J.J. (1952), Stability of the self-concept as a dimension of personality, *Journal of Abnormal Social Psychology*, 47, 597-606.
- Bullen, J.G. and Hemsley, D.R. (1984), Psychoticism and visual recognition, *Personality and Individual Differences*, 5, 735-739.
- Buss, A.H. (1997), Evolutionary perspectives of personality traits, in R. Hogan, J. Johnson and S. Briggs (eds), *The Handbook of Personality Psychology*, pp 345-366, London, Academic Press.

- Caird, D. (1987), Religiosity and personality: are mystics introverted, neurotic, or psychotic? *British Journal of Social Psychology*, 26, 345-346.
- Campbell, J.B. and Reynolds, J.H. (1984), A comparison of the Guilford and Eysenck factors of personality, *Journal of Research in Personality*, 18, 305-320.
- Caprara, G.V., Marizi, J. and Perugini, M. (1992), Investigating guilt in relation to emotionality and aggression, *Personality and Individual Differences*, 13, 519-532.
- Carrigan, P.M. (1960), Extraversion-introversion as a dimension of personality: a reappraisal, *Psychological Bulletin*, 57, 329-360.
- Cattell, R.B. (1957), *Personality and Motivation: structure and measurement*, Harrap, London.
- Cattell, R.B., Eber, H.W. and Tatsuoka, M.M. (1970), *Handbook for the Sixteen Personality Factor Questionnaire (16PF)*, Champaign, Illinois, Institute for Personality and Ability Testing.
- Centers, R. (1969), The anal character and social severity in attitudes, *Journal of Projective Techniques and Personality Assessment*, 33, 501-506.
- Chalmers, E.M. (1969), The relationship between personality characteristics and performance in the Seventh-day Adventist ministry, Unpublished doctoral dissertation, University of Tennessee (Knoxville), DAI 31: 3043B.
- Childers, R.D. and White, W.J. (1966), The personality of select theological students, *Personnel and Guidance Journal*, 44, 507-510.
- Chlewinski, Z. (1981), Personality and attitude towards religion in Poland, *Personality and Individual Differences*, 2, 243-245.
- Clark, W.H. and Earner, C.M. (1955), The relation of church to honesty and kindness in a small community, *Religious Education*, 50, 340-342.
- Coate, M.A. (1989), *Clergy Stress: the hidden conflicts in ministry*, London, SPCK.
- Comstock, G. W. and Partridge, K. B. (1972), Church attendance and health, *Journal of Chronic Diseases*, 25, 665-672.
- Coopersmith, S. (1967), *The Antecedents of Self-Esteem*, San Francisco, California, Freeman.
- Costa, P.T. and McCrae, R.R. (1995), Primary traits of Eysenck's PEN system: three- and five-factor solutions, *Journal of Personality and Social Psychology*, 69, 308-317.

- Cowen, E.L. (1954), The negative self-concept as a personality measure, *Journal of Consulting Psychology*, 18, 138-142.
- Crawford, M.E., Handal, P.J. and Wiener, R.L. (1989), The relationship between religion and mental health/distress, *Review of Religious Research*, 31, 16-22.
- Crowne, D.P. and Marlowe, D. (1960), A new scale of social desirability independent of psychopathology, *Journal of Consulting Psychology*, 24, 349-354.
- Cryns, A.G. (1970), Dogmatism of Catholic clergy and ex-clergy: a study of ministerial role perseverance and open-mindedness, *Journal for the Scientific Study of Religion*, 9, 239-243.
- Cutler, S.J. (1976), Membership in different types of voluntary associations and psychological well-being, *The Gerontologist*, 16, 335-339.
- Dahlstrom, W.G. and Welsh, G.S. (1960), *An MMPI Handbook*, Minneapolis, Minnesota, University of Minnesota Press.
- Derogatis, L. and Melisaratos, N. (1983), The Brief Symptom Inventory: an introductory report, *Psychological Medicine*, 13, 595-605.
- Di Giuseppe, R. (1971) Dogmatism correlations with strength of religious conviction, *Psychological Reports*, 28, 64.
- Di Renzo, G.J. (1967), Dogmatism and orientations toward liturgical change, *Journal for the Scientific Study of Religion*, 6, 278.
- Dodson, F.J. (1957), Personality factors in the choice of the Protestant ministry as a vocation, Unpublished doctoral dissertation, University of Southern California.
- Dommert, E.M. (1967), An adaptation of Rokeach's Dogmatism Scale for use with elementary school children, unpublished M.A. dissertation. Texas Women's University: Denton, Texas.
- Drwal, R. L. (1995), *Adaptacja kwestionariuszy osobowosci* (adaptation of personality questionnaires) Warszawa, wydawnictwo Naukowe PWN
- Dunn, J. and Munn, P. (1986), Siblings and the development of prosocial behaviours, *International Journal of Behavioural Development*, 9, 265-284.
- Durkheim, (1915), *The Elementary Forms of Religious Life*, London, Allen and Unwin Ltd.

- Eaves, L.J., Martin, N.G. and Eysenck, S.B.G. (1977), An application of the analysis of covariance structure to the psychological study of impulsiveness, *British Journal of Mathematical and Statistical Psychology*, 30, 185-197.
- Eckhardt, W. and Newcombe, A.G. (1969), Militarism, personality, and other social attitudes. *Conflict Resolution*, 13, 210-219.
- Edwards, A.L. (1954), *Manual of the Personal Preference Schedule*, New York, the Psychological Corporation.
- Edwards, A.L. (1957), *Techniques of Attitude Scale Construction*, New York, Appleton-Century-Crofts.
- Edwards, A.L. (1959), *Personal Preference Schedule Test Manual (revised ed)*, New York, Psychological Corporation.
- Eisenberg, N., Shell, R., Pasternack, J., Lennon, R., Beller, R., and Mathy, R.M. (1987), Prosocial development in middle childhood: a longitudinal study, *Developmental Psychology*, 23, 712-718.
- Eisinga, R., Felling, A. and Peters, J. (1990), Church involvement, prejudice and nationalism: a research note on the curvilinear relationship between church involvement and ethnocentrism in the Netherlands. *Review of Religious Research*, 31, 417-433.
- Ekman, P., (1994), All emotions are basic in I. P. Ekman and R. J. Davidson (eds), *The Nature of Emotion: fundamental questions*, New York, Oxford University Press.
- Ekman, P., Friesen, W.V. and Ellsworth, P. (1972) *Emotion in the human face: guidelines for research and an integration of findings*, New York, Pergamon.
- Ellison, C.G. (1991), Religious involvement and subjective well-being, *Journal of Health and Social Behaviour*, 32, 80-99.
- Ellison, C.G. (1998), Introduction to symposium: religion, health and well-being, *Journal for the Scientific Study of Religion*, 37, 692-694.
- Enstrom, J.E. (1975), Cancer mortality among Mormons, *Cancer*, 36, 825-841.
- Enstrom, J.E. (1978), Cancer and total mortality among active Mormons, *Cancer*, 42, 1943-1951.
- Epstein, F.H., Carol, R and Simpson, R (1956), Estimation of caloric intake from dietary histories among population groups, *American Journal of Clinical Nutrition*, 4, 1-9.

- Estabrook, M. and Sommer, R. (1966), Study habits and introversion and extraversion, *Psychological Reports*, 19, 750.
- Eysenck, H.J. (1947), *Dimensions of Personality*, London, Routledge and Kegan Paul.
- Eysenck, H.J. (1950), Schizothymia – cyclothymia as a dimension of personality. I. Historical review, *Journal of Personality*, 19, 123-152.
- Eysenck, H.J. (1951), Primary social attitudes as related to social class and political party, *British Journal of Sociology*, 2, 198-209.
- Eysenck, H.J. (1952a), *The Scientific Study of Personality*, London, Routledge and Kegan Paul.
- Eysenck, H.J. (1952b), Schizothymia – cyclothymia as a dimension of personality. II Experimental, *Journal of Personality*, 20, 345-384.
- Eysenck, H. J. (1953), *The Structure of Human Personality*, London, Mathuen & Co Ltd.
- Eysenck, H. J. (1954), *Psychology of Politics*, London, Routledge and Kegan Paul.
- Eysenck, H.J. (1956), The questionnaire measurement of neuroticism and extraversion, *Rivista di Psicologia*, 50, 113-140.
- Eysenck, H.J. (1958), A short questionnaire for the measurement of two dimensions of personality, *Journal of Applied Psychology*, 42, 14-17.
- Eysenck, H.J. (1959a), *Manual for the Maudsley Personality Inventory*, London, University of London Press.
- Eysenck, H. J. (1959b), The differentiation between normal and various neurotic groups on the Maudsley Personality Inventory, *British Journal of Psychology*, 50, 176-177.
- Eysenck, H.J. (1967), Personality patterns in various groups of businessmen, *Occupational Psychology*, 41, 449-450.
- Eysenck, H.J. (1976), Structure of social attitudes, *Psychological Reports*, 39, 463-466.
- Eysenck, H.J., Barrett, P., Wilson, G. and Jackson, C. (1992), Primary trait measurement of the 21 components of the PEN system, *European Journal of Psychological Assessment*, 8, 109-117.
- Eysenck, H.J. and Eysenck, S.B.G. (1962), A factorial study of an interview questionnaire, *Journal of Clinical Psychology*, 18, 286-290.
- Eysenck, H.J. and Eysenck, S.B.G. (1964), *Manual of the Eysenck Personality Inventory*, London, University of London Press.

- Eysenck, H.J. and Eysenck, S.B.G. (1968), A factorial study of psychoticism as a dimension of personality, *Multivariate Behavioural Research*, Special Issue, 15-32.
- Eysenck, H.J. and Eysenck, S.B.G. (1969), *Personality Structure and Measurement*, London, Routledge & Kegan Paul Ltd.
- Eysenck, H.J. and Eysenck, S.B.G. (1975), *Manual of the Eysenck Personality Questionnaire (adult and junior)*, London, Hodder and Stoughton.
- Eysenck, H.J. and Eysenck, S.B.G. (1976), *Psychoticism as a Dimension of Personality*, London, Hodder and Stoughton.
- Eysenck, H.J. and Eysenck, S.B.G. (1991), *Manual of the Eysenck Personality Scales*, London, Hodder and Stoughton.
- Eysenck, H.J. and Wilson, G. (1976), *Know Your Own Personality*, Harmondsworth, Penguin
- Eysenck, H.J., Wilson, G. and Jackson, C.J. (1999), *Manual of the Eysenck Personality Profiler (short)*, Guilford, Corporate Assessment Network Ltd.
- Eysenck, S.B.G. (1960), Social class, sex, and response to a five-part personality inventory, *Educational and Psychological Measurement*, 20, 47-54.
- Eysenck, S.B.G., Barrett, P. and Barnes, G.E. (1993), A cross-cultural study of personality: Canada and England, *Personality and Individual Differences*, 14, 1-9.
- Eysenck, S.B.G., Easting, G. and Pearson, P.R. (1984), Age norms for impulsiveness in children, *Personality and Individual Differences*, 5, 315-321.
- Eysenck, S.B.G. and Eysenck, H.J. (1963), On the dual nature of extraversion, *British Journal of Social and Clinical Psychology*, 2, 46-55.
- Eysenck, S.B.G. and Eysenck, H.J. (1968), The measurement of psychoticism: a study of factor stability and reliability, *British Journal of Social and Clinical Psychology*, 7, 286-294.
- Eysenck, S.B.G. and Eysenck, H.J. (1969), Scores on three personality variables as a function of age, sex and social class, *British Journal of Social and Clinical Psychology*, 8, 69-76.
- Eysenck, S.B.G. and Eysenck, H.J. (1972), The questionnaire measurement of psychoticism, *Psychological Medicine*, 2, 50-55.

Eysenck, S.B.G. and Eysenck, H.J. (1977), The place of impulsiveness in a dimensional system of personality description, *British Journal of Social and Clinical Psychology*, 16, 57-68.

Eysenck, S.B.G. and Eysenck, H.J. (1978), Impulsiveness and venturesomeness: their position in a dimensional system of personality, *Psychological Reports*, 43, 1247-1255.

Eysenck, S.B.G. and Eysenck, H.J. (1980), Impulsiveness and venturesomeness in children, *Personality and Individual Differences*, 1, 73-78.

Eysenck, S.B.G., Eysenck, H.J. and Barrett, P. (1985), A revised version of the psychoticism scale, *Personality and Individual Differences*, 6, 21-29.

Eysenck, S.B.G. and McGurk, B.J. (1980), Impulsiveness and venturesomeness in a detention centre population, *Psychological Reports*, 47, 1299-1306.

Eysenck, S.B.G. and Zuckerman, M. (1978), The relationship between sensation-seeking and Eysenck's dimensions of personality, *British Journal of Psychology*, 69, 483-487.

Fagan, J. and Breed, G. (1970), A good short measure of religious dogmatism, *Psychological Reports*, 26, 533-534.

Farber, M.L. (1955), The anal character and political aggression, *Journal of Abnormal and Social Psychology*, 51, 486-489.

Farley, F.H. (1966a), Social desirability, extraversion and neuroticism: a learning analysis, *Journal of Psychology*, 64, 113-118.

Farley, F.H. (1966b), Introversion and achievement motivation, *Psychological Reports*, 19, 112.

Farley, F.H. (1967), On the independence of extraversion and neuroticism, *Journal of Clinical Psychology*, 23, 154-156.

Farley, F. H. (1968), Extraversion and the self-description of endurance, *British Journal of Social and Clinical Psychology*, 7, 1-2.

Feather, N.T. (1964), Acceptance and rejection of arguments in relation to attitude strength, critical ability and intolerance of uncertainty, *Journal of Abnormal and Social Psychology*, 69, 127-136.

Feather, N.T. (1967), Evaluation of religious and neutral arguments in religious and atheist student groups, *Australian Journal of Psychology*, 19, 3-12.

- Featherman, D.L. (1971), The socioeconomic achievement of white religio-ethnic subgroups: social and psychological explanations, *American Sociological Review*, 36, 207-222.
- Fehr, L.A. and Heintzelman, M.E. (1977), Personality and attitude correlates of religiosity: source of controversy, *Journal of Psychology*, 95, 63-66.
- Ferguson, L.W. (1944), Socio-psychological correlates of primary attitude scales: I religionism, II humanitarianism, *Journal of Social Psychology*, 19, 81-98.
- Ferguson, M.A. and Valenti, J.M. (1991), Communicating with environmental and health risk takers: an individual differences perspective, *Health Education Quarterly*, 18, 303-318.
- Ferraro, K.F. and Albrecht-Jensen, C.M. (1991), Does religion influence adult health?, *Journal for the Scientific Study of Religion*, 30, 193-202.
- Fichter, J.H. (1984), The myth of clergy burnout, *Sociological Analysis*, 45, 373-382.
- Fichter, J.H. (1985), The Dilemma of priest retirement, *Journal for the Scientific Study of Religion*, 24, 101-104.
- Figert, R.L. (1968), An elementary school form of the Dogmatism Scale, *Journal of Experimental Education*, 37, 19-24.
- Finke, R and Stark, R. (1992), *The Churching of America, 1776-1990: winners and losers in our religious economy*, New Brunswick, New Jersey, Rutgers University Press.
- Fitts, W. H. (1965), *The Tennessee Self-Concept Scale*, Nashville, Tennessee, Counsellor Recordings and Testings.
- Fleck, J.R., McThomas, A.R., Nielsen, L.F. and Shumaker, D.G. (1973), Self-concept change in ministers and missionaries. *Journal of Psychology and Theology*, 1, 3, 28-34.
- Fontana, D. (1980), Some standardisation data for the Sandler-Hazari Obsessionality Inventory, *British Journal of Medical Psychology*, 53, 267-275.
- Forst, E. and Healy, R.M. (1990), Relationship between self-esteem and religious faith, *Psychological Reports*, 67, 378.
- Francis, L.J. (1978), Attitude and longitude: a study in measurement, *Character Potential*, 8, 119-130.

Francis, L.J. (1991), The personality characteristics of Anglican ordinands: feminine men and masculine women? *Personality and Individual Differences*, 12, 1133-1140.

Francis, L.J. (1992), Male and female clergy in England: their personality differences, gender reversal? *Journal of Empirical Theology*, 5, 2, 31-38.

Francis, L.J. (1993), Reliability and validity of a short scale of attitude towards Christianity among adults, *Psychological Reports*, 72, 615-618.

Francis, L.J. (1997), The psychology of gender differences in religion: a review of empirical research, *Religion*, 27, 81-96.

Francis, L.J., Brown, L.B. and Philipchalk, R. (1992), The development of an abbreviated form of the Revised Eysenck Personality Questionnaire (EPQR-A): its use among students in England, Canada, the USA and Australia, *Personality and Individual Differences*, 13, 443-449.

Francis, L.J. and Kay, W.K. (1995), The personality characteristics of Pentecostal ministry candidates, *Personality and Individual Differences*, 18, 581-594.

Francis, L.J. and Lankshear, D.W. (1998), Personality and preference for rural ministry among male Anglican clergy, *Pastoral Psychology*, 46, 163-166.

Francis, L.J. and Musson, D.J. (1999), Male and female Anglican clergy in England: gender reversal on the 16PF? *Journal of Empirical Theology*, 12, 2, 5-16.

Francis, L.J. and Pearson, P.R. (1985a), Extraversion and religiosity, *Journal of Social Psychology*, 125, 269-270.

Francis, L.J. and Pearson, P.R. (1985b), Psychoticism and religiosity among 15 year olds, *Personality and Individual Differences*, 6, 397-398.

Francis, L.J. and Pearson, P.R. (1988), Religiosity and the short-scale EPQ-R indices of E, N and L, compared with the JEPI, JEPQ and EPQ, *Personality and Individual Differences*, 9, 653-657.

Francis, L.J. and Pearson, P.R. (1991), Personality characteristics of mid-career Anglican clergy, *Social Behaviour and Personality*, 19, 81-84.

Francis, L.J., Pearson, P.R., Carter, M. and Kay, W.K. (1981), The relationship between neuroticism and religiosity among English 15- and 16-year olds, *Journal of Social Psychology*, 114, 99-102.

Francis, L.J., Pearson, P.R., and Kay, W.K. (1983), Are religious children bigger liars? *Psychological Reports*, 52, 551-554.

- Francis, L.J. and Robbins, M. (1996), Differences in the personality profile of stipendiary and non-stipendiary female Anglican parochial clergy in Britain and Ireland, *Contact*, 119, 26-32.
- Francis, L.J. and Robbins, M. (1999), The relationship between personality and satisfaction/dissatisfaction with ministry among female stipendiary Anglican clergy in the UK, *Pastoral Psychology*, 47, 439-444.
- Francis, L.J. and Rodger, R. (1994a), The influence of personality on clergy role prioritization, role influences, conflict and dissatisfaction with ministry, *Personality and Individual Differences*, 16, 947-957.
- Francis, L.J. and Rodger, R. (1994b), The personality profile of Anglican clergymen, *Contact*, 113, 27-32.
- Francis, L.J. and Stubbs, M.T. (1987), Measuring attitudes towards Christianity: from childhood into adulthood, *Personality and Individual Differences*, 8, 741-743.
- Francis, L.J. and Thomas, T.H. (1992), Personality profile of conference-going clergy in England, *Psychological Reports*, 70, 682.
- Francis, L.J. and Thomas, T.H. (1996a), Mystical orientation and personality among Anglican clergy, *Pastoral Psychology*, 45, 99-105.
- Francis, L.J. and Thomas, T.H. (1996b), Are Anglo Catholic priests more feminine? a study among male Anglican clergy, *Pastoral Sciences*, 15, 15-22.
- Francis, L.J. and Thomas, T.H. (1997), Are charismatic ministers less stable? a study among male Anglican clergy, *Review of Religious Research*, 39, 61-69.
- Frankel, B.G. and Hewitt, W.E. (1994), Religion and well-being among Canadian university students: the role of faith groups on campus, *Journal for the Scientific Study of Religion*, 33, 62-73.
- Fraser, G.E., Sabate, J., Beeson, W.L. and Strahan, T.M. (1992), A possible protective effect of nut consumption on risk of coronary heart disease, *Archives of International Medicine*, 152, 1416-1424.
- Frenz, A.W. and Carey, M.P. (1989), Relationship between religiousness and trait anxiety: fact or artifact? *Psychological Reports*, 65, 827-834.
- Freud, S. (1950a), *Totem and Taboo*, London, Routledge and Kegan Paul.
- Freud, S. (1950b), *The Future of an Illusion*, New Haven, Yale University Press.

Freud, S. (1953), Totem and taboo, in J. Strachey (editor and translator), *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol.13, pp.1-161, London, Hogarth Press.

Freud, S. (1957), *The Future of an Illusion*, New Haven, Connecticut, Yale University Press.

Freud, S. (1959), Obsessive acts and religious practices, in J. Strachey (editor and translator), *The Standard Edition of the Complete Psychological Works of Sigmund Freud* vol.9, pp.115-127, London, Hogarth Press.

Freud, S. (1964), *Moses and Monotheism*, London, The Hogarth Press and the Institute for Psychoanalysis

Friedlander, Y., Kark, J.D. and Stein, Y. (1986), Religious orthodoxy and myocardial infarction in Jerusalem: a case control study, *International Journal of Cardiology*, 10, 33-41.

Friedman, E.H. and Hellerstein, H.K. (1968), Occupational stress, law school hierarchy and coronary artery disease in Cleveland attorneys, *Psychosomatic Medicine*, 30, 72-86.

Friedman, H.S. and Schustack, M.W. (1999), *Personality: classical theories and modern research*, London, Allyn and Bacon.

Friedrichs, R.W. (1960), Alter versus ego: an exploratory assessment of altruism, *American Sociological Review*, 25, 496-508.

Fritts, W.H. (1976), *Manual for the Tennessee Self-Concept Scale*, Nashville, Tennessee, Counsellor Recordings and Tests.

Fuchs, J.A., Levinson, R.M., Stoddard, R.R., Mullet, M.E. and Jones, D.H. (1990), Health risk factors among the Amish: results of a survey, *Health Education Quarterly*, 17, 197-211.

Furnham, A. (1984), Personality and values, *Personality and Individual Differences*, 5, 483-485.

Furnham, A. and Brewin, C.R. (1990), Personality and happiness, *Personality and Individual Differences*, 11, 1093-1096.

Furnham, A., Forde, L. and Cotter, T. (1998a), Personality scores and test taking style, *Personality and Individual Differences*, 24, 19-23.

- Furnham, A., Forde, L. and Cotter, T. (1998b), Personality and intelligence, *Personality and Individual Differences*, 24, 187-192.
- Furnham, A., Forde, L. and Ferrari, K. (1999), Personality and work motivation, *Personality and Individual Differences*, 26, 1035-1043.
- Furnham, A. and Zacherl, M. (1986), Personality and job satisfaction, *Personality and Individual Differences*, 7, 453-459.
- Gaudette, L.A., Holmes, T.M., Laing, L.M., Morgan, K. and Grace, M.G.A. (1978), Cancer incidence in a religious isolate of Alberta, Canada, 1953-74, *Journal of the National Cancer Institute*, 60, 1233-1238.
- Gibbins, K.C. and Savage, R.D. (1965), Intelligence, study habits and personality factors in academic success, *Durham Research Review*, 5, 16, 8-12.
- Gilk, D.C. (1990), Participation in spiritual healing, religiosity and mental health, *Sociological Inquiry*, 60, 158-176.
- Gill, N.T. and Thornton, L.H. (1989), Religious orientation and self-esteem among high school students, *High School Journal*, 73, 1, 47-60.
- Gilmore, S.K. 1969. Personality differences between high and low dogmatism groups of Pentecostal believers. *Journal for the Scientific Study of Religion*, 8, 161-164.
- Ginsburg, H.J. and Miller, S.M. (1982), Sex differences in children's risk-taking behavior, *Child Development*, 53, 426-428.
- Giorgi, L and Marsh, C. (1990), The protetsant work ethic as a cultural phenomenon, *European Journal of Social Psychology*, 20, 499-517.
- Glass, K.D. (1971) Denominational differences in religious belief, practice, anxiety and dogmatism. *Religious Education*, 66, 204-206.
- Glenn, N. and Hyland, R. (1967), Religious preference and worldly success: some evidence from national surveys, *American Sociological Review*, 32, 73-85.
- Glock, C.Y. and Stark, R. (1965), *Religion and Society in Tension*, Chicago, Rand McNally.
- Glow, R.A., Lange, R.V., Glow, P.H. and Barnett, J.A. (1983), Cognitive and self-reported impulsiveness: comparison of Kagan's MFFT and Eysenck's EPQ impulsiveness measures, *Personality and Individual Differences*, 4, 179-187.

- Godwin, A.E. (1989), Cattell's 16PF test factors as predictors of ego identity status among new staff members of campus crusade for Christ, Unpublished PhD dissertation, Western conservative Baptist seminary.
- Goh, D.S., King, D.W. and King, L.A. (1982), Psychometric evaluation of the Eysenck Personality Questionnaire, *Educational and Psychological Measurement*, 42, 297-309.
- Goldbourt, U., Yaari, S. and Medalie, J.H. (1993), Factors predictive of long-term coronary heart disease mortality among 10,059 male Israeli civil servants and municipal employees: a 23 -year mortality follow-up in the Israeli Ischemic Heart Disease Study, *Cardiology*, 82, 100-121.
- Gore, E.J. and Harvey, O.J. (1995), A factor analysis of a scale of shame and guilt: dimensions of conscience questionnaire, *Personality and Individual Differences*, 19, 769-771.
- Gorsuch, R.L. and Aleshire, D. (1974) Christian faith and ethnic prejudice: a review and interpretation of research, *Journal for the Scientific Study of Religion*, 13, 281-307.
- Gorsuch, R.L. and Venable, G.D. (1983), Development of an 'Age Universal' I-E scale, *Journal for the Scientific Study of Religion*, 22, 181-187.
- Gossop, M.R. and Eysenck, H.J. (1983), A comparison of the personality of drug addicts in treatment with that of a prison population, *Personality and Individual Differences*, 4, 207-209.
- Gough, H.G. (1952), *The Adjective Check List*, Berkeley, California, University of California Press.
- Gough, H.G. (1975), *Manual for the California Psychological Inventory (rev. ed.)*, Palo Alto, California, Consulting Psychologists Press.
- Graney, M.J. (1975), Happiness and social participation in aging, *Journal of Gerontology*, 30, 701-706.
- Graziano, W.G. and Eisenberg, N. (1999), Agreeableness: a dimension of personality in R. Hogan, J. Johnson and S. Briggs (eds), pp. 795-824, *A Handbook of Personality Psychology* London, Academic Press.
- Greeley, A.M. (1963), Influence of the 'Religious factor' on career plans and occupational values of college graduates, *American Journal of Sociology*, 68, 658-671.
- Gregory, W.E. (1957), The orthodoxy of the authoritarian personality, *Journal of Social Psychology*, 45, 217-232.

- Griffin, G.A.E., Gorsuch, D.L. and Davis, A.E. (1987), A cross-cultural investigation of religious orientation, social norms and prejudice, *Journal for the Scientific Study of Religion*, 26, 358-365.
- Grygier, T.G. and Grygier, P. (1976), *Manual to the Dynamic Personality Inventory*, Windsor, NFER.
- Guilford, J.P. (1975), Factors and factors of personality, *Psychological Bulletin*, 82, 802-814.
- Guilford, J.P. and Guilford, R.B. (1934), An analysis of the factors in a typical test of introversion – extraversion, *Journal of Abnormal Social Psychology*, 28, 377-399.
- Guilford, J.P. and Guilford, R.B. (1936), Personality factors, S E and M and their measurement, *Journal of Personality*, 2, 109-127.
- Guilford, J.P. and Guilford, R.B. (1939a), Personality factors, D, R, T and A, *Journal of Abnormal and Social Psychology*, 34, 21-36.
- Guilford, J.P. and Guilford, R.B. (1939b), Personality factors N and G D, *Journal of Abnormal and Social Psychology*, 34, 239-248.
- Guilford, J.S., Zimmerman, W.S. and Guilford, J.P. (1976), *The Guilford-Zimmerman Temperament Survey Handbook*, San Diego, California, Edits.
- Gutman, G.M. (1966), A note on the MPI: age and sex differences in extraversion and neuroticism in a Canadian sample, *British Journal of Social and Clinical Psychology*, 5, 128-129.
- Hagan, J., Simpson, J. and Gillis, A.R. (1988), Feminist scholarship, relational and instrumental control, and a power-control theory of gender and delinquency, *British Journal of Sociology*, 39, 301-336.
- Hamman, R.F., Barancik, J.I. and Liliensfeld, A.M. (1981), Patterns of mortality in Old Order Amish I: background and major causes of death, *American Journal of Epidemiology*, 114, 845-861.
- Hannah, F., Storm, T. and Caird, W.K. (1965), Sex differences and relationships among neuroticism, extraversion, and expressed fears, *Perceptual and Motor Skills*, 20, 1214-1216.
- Hanawalt, N.G. (1963), Feelings of security and self-esteem in relation to religious belief, *Journal of Social Psychology*, 59, 347-353.

- Harbaugh, G.L. and Rogers, E. (1984), Pastoral burnout: a view from the seminary, *The Journal of Pastoral Care*, 38, 99-106.
- Harder, D.H. and Lewis, S.J. (1987), The assessment of shame and guilt, in J.N. Butcher and C.D. Spielberger (eds), *Advances in Personality Assessment*, vol.6, pp 89-114, Hillsdale, New Jersey, Lawrence Earlbaum Associates.
- Harder, D.H. and Zalma, A. (1990), Two promising shame and guilt scales: a construct validation comparison, *Journal of Personality Assessment*, 55, 729-745.
- Harvey, O.J., Frank, H., Gore, E.J. and Batres, A.R. (1998), Relationship of belief systems to shame and guilt, *Personality and Individual Differences*, 25, 769-783.
- Harvey, O.J., Gore, E.J., Frank, H. and Batres, A.R. (1997), Relationship of shame and guilt to gender and parenting practices, *Personality and Individual Differences*, 23, 135-146.
- Hassan, M.K. and Khalique, A. (1981), Religiosity and its coordinates in college students, *Journal of Psychological Research*, 25, 129-136.
- Hathaway, S.R. and McKinley, J.C. (1951), *The Minnesota Multiphasic Personality Inventory Manual*, New York, Psychological Corporation.
- Hathaway, S.R. and McKinley, J.C. (1967), *The Minnesota Multiphasic Personality Inventory Manual*, New York, Psychological Corporation.
- Heaven, P.C.L. (1990), Religious values and personality dimensions, *Personality and Individual Differences*, 11, 953-956.
- Heintzelman, M.E. and Fehr, L.A. (1976), Relationship between religious orthodoxy and three personality variables, *Psychological Reports*, 38, 756-758.
- Heisel, MA. and Faulkner, A.O. (1982), Religiosity in an old black population, *The Gerontologist*, 22, 35-358.
- Helmes, E. (1980), A psychometric investigation of the Eysenck Personality Inventory, *Applied Psychological Measurement*, 4, 43-55.
- Hernandez, S.K. and Mauger, P.A. (1980), Assertiveness, aggressiveness and Eysenck's personality variables, *Personality and Individual Differences*, 1, 143-149.
- Hertsgaard, D. and Light, H. (1984), Anxiety, depression, and hostility in rural women, *Psychological Reports*, 55, 673-674.

Hills, P. and Argyle, M. (1998), Positive moods derived from leisure and their relationship to happiness and personality, *Personality and Individual Differences*, 25, 523-535.

Hjelle, L.A. and Lomastro, J. (1971), Personality differences between high and low dogmatism groups of Catholic seminarians and religious sisters, *Journal for the Scientific Study of Religion*, 10, 49-50.

Hoffman, M.L. (1981), Is altruism part of human nature, *Journal of Personality and Social Psychology*, 40, 121-137.

Hofman, J.E., Beit-Hallahmi, B. and Lazarowitz, R. (1982), Self-descriptors of Jewish and Arab adolescents in Israel: a factor study, *Journal of Personality and Social Psychology*, 43, 786-792.

Hoge, D.R. and Carroll, J.W. (1973), Religiosity and prejudice in northern and southern churches, *Journal for the Scientific Study of Religion*, 12, 181-197.

Hollingshead, A.B. and Redlich, F.C. (1953), Social stratification and psychiatric disorders, *American Sociological Review*, 18, 163-169.

Holloway, A. (1979), *Decision making under uncertainty: models and choices*, Englewood Cliffs, New Jersey, Prentice Hall.

Holmes, T.H. and Rahe, R.H. (1967), The social readjustment rating scale, *Journal of Psychosomatic Research*, 11, 213-218.

Homola, M., Knudsen, D. and Marshall, H. (1987), Religion and Socio-Economic Achievement, *Journal for the Scientific Study of Religion*, 26, 201-217.

Hong, L. (1966) Religious styles, dogmatism and orientations to change, *Sociological Analysis*, 27, 239-242.

Hood, R.W. (1975), The construction and preliminary validation of a measure of reported mystical experience, *Journal for the Scientific Study of Religion*, 14, 29-41.

Hood, R.W. (1992), Sin and guilt in faith traditions: issues for self-esteem, in J.F. Schumaker (ed.), *Religion and Mental Health*, pp. 110-121, Oxford, Oxford University Press.

Hummer, R.A., Rogers, R.G., Nam, C.B. and Ellison, C.G. (1999), Religious involvement and U.S. adult mortality, *Demography*, 32, 2.

- Hunsberger, B. (1996), Religious fundamentalism, right-wing authoritarianism, and hostility toward homosexuals in non-Christian religious groups, *International Journal for the Psychology of Religion*, 6, 39-49.
- Hunt, R.A. (1972), Mythological-symbolic religious commitment: the LAM scales. *Journal for the Scientific Study of Religion*, 10, 42-52.
- Hutchinson, G.T., Patock-Peckham, J.A. Cheong, J.W., Nagoshi, C.T. (1998), Personality predictors of religious orientation among, protestant, catholic and non-religious college students, *Personality and Individual Differences*, 24, 145-151.
- Irvine, A.R. (1997), *Between Two Worlds: understanding and managing clergy stress*, London, Mowbray.
- Jackson, C.J. and Corr, P.J. (1998), Personality-performance correlations at work, individual and aggregate levels of analysis, *Personality and Individual Differences*, 24, 815-820.
- Jackson, C. J., Furnham, A. and Lawty-Jones, M, (1999), Relationship between indecisiveness and neuroticism: the moderating effect of a tough-minded culture, *Personality and Individual Differences*, 27, 789-800.
- Jackson, C. J., Furnham, A., Forde, L. and Cotter, T, (2000), The structure of the Eysenck Personality Profiler, *British Journal of Psychology*, 91, 223-239.
- Jackson, C.J. and Wilson, G.D. (1993), Mad, bad or sad? the personality of bikers? *Personality and Individual Differences*, 14, 241-242.
- Jackson, C.J. and Wilson, G.D. (1994), Group obsessiveness as a moderator of dissimulation on neuroticism scales, *European Journal of Psychological Assessment*, 10, 224-228.
- Jackson, E.F. and Cockett, H.J. (1964), Occupational Mobility in the United States: a point estimate and trade comparison, *American Sociological Review*, 29, 5-15.
- Jackson, E.F., Fox, W.S. and Crockett, H.J. (1970), Religion and Occupation achievement, *American Sociological Review*, 35, 48-63.
- Jalota, S. (1965), A study of the Maudsley Personality Inventory, *Indian Psychological Review*, 2 , 29-30.
- James, W. (1902), *The Varieties of Religious Experience: a study in human nature*, London, Fontana.
- Jarvis, G. K. (1977), Mormon mortality rates in Canada, *Social Biology*, 24, 294-302.

- Jarvis, G.K. and Northcott, H.C. (1987), Religion and differences in morbidity and mortality, *Social Sciences and Medicine*, 25, 813-824.
- Jedrychowski, W, Tobiasz-Adamczyck, B and Olma, A and Gradzikiewicz, P (1985), Survival rates among Seventh-Day Adventists compared with the general population in Poland, *Scandinavian Journal of Social Medicine*, 13, 49-52.
- Jelen, T.G. and Wilcox, C. (1991), Religious dogmatism among white Christians: causes and effects, *Review of Religious Research*, 33, 32-46.
- Jensen, A. (1958), The Maudsley Personality Inventory, *Acta Psychologica*, 19, 314-325.
- Jensen, O.M., (1983), Cancer risk among Danish male Seventh-Day Adventists and other temperance society members, *Journal of the National Cancer Institute*, 70, 1011 - 1014.
- Johnson, R.C., Danko, O.P., Huang, Y-H., Park, J.Y., Johnson, S.B. and Nagoshi, C.T. (1987), Guilt, shame and adjustment in three cultures, *Personality and Individual Differences*, 8, 357-364.
- Johnson, R.C., Kim, R.J. and Danko, O.P. (1989), Guilt, shame and adjustment: a family study, *Personality and Individual Differences*, 10, 71-74
- Jones, D.L. and Francis, L.J. (1992), Personality profile of Methodist ministers in England, *Psychological Reports*, 70, 538.
- Jones, M.B. (1958), Religious values and authoritarian tendency, *Journal of Social Psychology*, 48, 83-89.
- Jones, S.H. and Francis, L.J. (1996), Religiosity and self-esteem during childhood and adolescence, in L.J. Francis, W.K. Kay and W.S. Campbell (eds), *Research in Religious Education*, pp. 189-205, Leominster, Gracewing.
- Juan, J.R., Paiva, R.E.A., Haley, H.B. and O'Keefe, R.D. (1974), High and low levels of dogmatism in relation to personality characteristics of medical students: a follow-up study, *Psychological Reports*, 34, 303-315.
- Jung, C. G. (1923), *Psychological Types*, New York, Harcourt, Brace.
- Juni, S. and Fischer, R.E. (1985), Religiosity and preoedipal fixation, *Journal of Genetic Psychology*, 146, 27-35.
- Kahoe, R.D. (1974) Personality and achievement correlates of intrinsic and extrinsic religious orientations, *Journal of Personality and Social Psychology*, 29, 812-818.

Kahoe, R.D. and Dunn, R.F. (1975), The fear of death and religious attitudes and behaviour, *Journal for the Scientific Study of Religion*, 14, 379-382.

Kaiser, D.L. (1991), Religious problem-solving styles and guilt, *Journal for the Scientific Study of Religion*, 30, 94-98.

Kaldestad, E. (1992), Religious orientation, personality, mental health, and religious activity, *Nordic Journal of Psychiatry*, 46, 321-328.

Kaldestad, E. (1993), Letter to the editor, *Nordic Journal of Psychiatry*, 47, 305-306.

Kaldestad, E. (1995), The empirical relationships of the religious orientations to personality, *Scandinavian Journal of Psychology*, 36, 95-108.

Kania, W. (1967), Healthy defensiveness in theological students. *Ministry Studies* 1, 4, 3-20.

Kaplan, B.H. (1976), A note on religious beliefs and coronary heart disease, *Journal of the South Carolina Medical Association*, 15, 5 supplement, pp. 60-64.

Kay, W.K. (1981), Psychoticism and attitude to religion, *Personality and Individual Differences*, 2, 249-252.

Keane, C. Gillis, A.R. and Hagan, J. (1989), Detemence and amplification of juvenile delinquency by police contact, *British Journal of Criminology*, 29, 336-353.

Kennedy, G.J., Kelman, H.R., Thomas, C. and Chen, J. (1996), The relation of religious preference and practice to depressive symptoms among 1,855 older adults, *Journal of Gerontology, Psychological Sciences*, SIB, 301-308.

Kilpatrick, D.G., Sutker, L.W. and Sutker, P.B. (1970), Dogmatism, religion, and religiosity, a review and re-evaluation, *Psychological Reports*, 26, 15-22.

Kirkpatrick, C (1949), Religion and humanitarianism: a study of institutional implications, *Psychological Monographs*, 63,4.

Kirkpatrick, L.A. (1993), Fundamentalism, Christian orthodoxy, and intrinsic religious orientation as predictors of discriminatory attitudes. *Journal for the Scientific Study of Religion*, 32, 256-268.

King, D.E., Hueston, W. and Rudy, M. (1994), Religious affiliation and obstetric

outcome, *Southern Medical Journal*, 87, 1125-1128.

Klass, E.T. (1987), Situational approach to assessment of guilt: development and validation of a self-report measure, *Journal of Psychopathology and Behavioral Assessment*, 9, 56-67.

Kleiber, D.V. Veldmen, D.J. and Menaker, S.L. (1973), The multi-dimensionality of locus of control, *Journal of Clinical Psychology*, 29, 411-416.

Kline, P. (1966), Extraversion, neuroticism and academic performance among Ghanaian university students, *British Journal of Educational Psychology*, 36, 92-94.

Kline, P. (1971), *Ai3Q: an experimental manual*, Windsor, National Foundation for Educational Research.

Kline, P. (1993), *The Handbook of Psychological Testing*, London, Routledge.

Knowles, J.B. (1960), The temporal stability of MPI scores in normal and psychiatric populations, *Journal of Consulting Psychology*, 24, 278.

Knowles, J.B. and Kreitman, N. (1965), The Eysenck Personality Inventory, *British Journal of Psychiatry*, 111, 755-759.

Koenig, H.G. (1995), Religion and older men in prison, *International Journal of Geriatric Psychiatry*, 10, 219-230.

Koenig, H.G. (1997), *Is Religion Good for Your Health? the effects of religion on physical and mental health*, New York, Haworth Pastoral Press.

Koenig, H.G., George, L.K. and Peterson, B.L. (1998), Religiosity and remission of depression in medically ill and older patients, *American Journal of Psychiatry*, 155, 536-542.

Koenig, H.G. and Larson, D.B. (1998), Use of hospital services, religious attendance, and religious affiliation, *Southern Medical Journal*, 91, 925-932.

Koepf, E.F. (1963), Authoritarianism and social workers: a psychological study, *ocial Work*, 8, 37-43.

Krause, N. and van Tran, T. (1989), Stress and religious involvement among older blacks, *Journal of Gerontology*, 44, S4-S13

Kretschmer, E. (1948), *Körperbau und Charakter*, Berlin, Springer, 22.

Kuratsune, M., Ikeda, M. and Hayashi, T. (1986), Epidemiologic studies on possible

health effects of intake of pyrolyzates of foods, with reference to mortality among Japanese Seventh-Day Adventists, *Environmental Health Perspectives*, 67, 143-146.

Lambert, M.J. and Suplee, E.C. (1997), Trends and practices in psychotherapy outcome assessment and their implications for psychotherapy and applied personality. In R. Hogan, J. Johnson and S. Briggs (eds), *The Handbook of Personality Psychology*, pp. 947-967, London, Academic Press.

Lengermann, J.J. and D'Antonio, W.V. (1974), Religion, dogmatism, and community leadership: an extension of the theories of the open and closed mind, *Sociological Analysis*, 25, 141-157.

Langston, M.G., Privette, G. and Vodanovich, S. (1994), Mental health values of clergy: effects of open-mindedness, religious affiliation and education in counselling, *Psychological Reports*, 75, 499-506.

Larson, D.B., Sherrill, K.A., Lyons, J.S., Craigie, F.C., Thielman, S.B., Greenwold, M.A. and Larson, S.S. (1992), Associations between dimensions of religious commitment and mental health reported, *American Journal of Psychiatry*, 149, 557-559.

Lenski, G.E. (1963), *The Religious Factor*, New York, Double Day.

Levin, J.S. (1994), Religion and health: is there an association, is it valid, and is it causal?, *Social Science and Medicine*, 38, 1475-1482.

Levin, J.S. and Chatters, L.M. (1998), research on mental health: a review of empirical findings and theoretical issues. In H.G. Koenig (ed), *The Handbook of Religion and Mental Health*, pp. 33-50, London, Academic Press.

Levin, J.S. and Markides, K.S. (1986), Religious attendance and subjective health, *Journal for the Scientific Study of Religion*, 25, 31-40.

Levin, J.S. and Schiller, P.L. (1987), Is there a religious factor in health?, *Journal of Religion and Health*, 26, 9-36.

Levin, J.S. and Vanderpool, H.Y. (1987), Is frequent religious attendance really conducive to better health?: toward an epidemiology of religion, *Social Science and Medicine*, 24, 589-600.

Lewis, C.A. (1994), Religiosity and obsessionality: the relationship between Freud's 'religious practices', *Journal of Psychology*, 128, 189-196.

Lewis, C.A. (1996), Religiosity and obsessionality, in L.J. Francis, W.K. Kay and W.S. Campbell (eds), *Research in Religious Education*, pp. 219-227, Leominster, Gracewing.

- Lewis, C.A. and Joseph, S. (1994a), Religiosity: psychoticism and obsessionality in Northern Irish university students, *Personality and Individual Differences*, 17, 685-687.
- Lewis, C.A. and Joseph, S. (1994b), Obsessive actions and religious practices, *Journal of Psychology*, 128, 699-700.
- Lewis, C.A. and Maltby, J. (1992), Religiosity and preoedipal fixation: a refinement, *Journal of Psychology*, 126, 687-688.
- Lewis, C.A. and Maltby, J. (1994), Religious attitudes and obsessional personality traits among UK adults, *Psychological Reports*, 75, 353-354.
- Lewis, C.A. and Maltby, J. (1995), Religious attitude and practice: the relationship with obsessionality, *Personality and Individual Differences*, 19, 105-108.
- Lewis, C.A. and Maltby, J. (1996), Personality, prayer, and church attendance in a sample of male college students in the USA, *Psychological Reports*, 78, 976-978.
- Lipsitt, L.P. (1958), A self-concept scale for children and its relationship to the children's form of the Manifest Anxiety Scale, *Child Development*, 29, 463-472.
- Lodhi, P.H. and Thakur, S. (1993), Personality of drug addicts: Eysenckian analysis, *Personality and Individual Differences*, 15, 121-128.
- Lolas, F., Gomez, A. and Suarez, L. (1991), EPQ-R and suicide attempt: the relevance of psychoticism, *Personality and Individual Differences*, 12, 899-902.
- London, P., Schulman, R.E. and Black, M.S. (1964), Religion, guilt and ethical standards, *The Journal of Social Psychology*, 63, 145-159
- Loo, R. (1979), A psychometric investigation of the Eysenck Personality Questionnaire, *Journal of Personality Assessment*, 43, 54-58.
- Lo Sciuto, L.A. and Hartley, E.L. (1963), Religious affiliation and open-mindedness in binocular resolution, *Perceptual and Motor Skills*, 17, 427-430.
- Louden, S.H. and Francis, L.J. (1999), The personality profile of Roman Catholic parochial secular priests in England and Wales, *Review of Religious Research*, 41, 65-79..
- Lovell, C.A. (1945), A study of the factor structure of thirteen personality variables, *Educational and Psychological Measurement*, 5, 335-350.
- Lu, L. and Argyle, M. (1991), Happiness and cooperation, *Personality and Individual Differences*, 12, 1019-1030.

Lu, L. and Argyle, M. (1992), Receiving and giving support: effects on relationships and well-being, *Counselling Psychology Quarterly*, 5, 123-133.

Lu, L. and Argyle, M. (1993), TV watching, soap opera and happiness, *Kaohsiung Journal of Medical Sciences*, 9, 501-507.

Lu, L. and Argyle, M. (1994), Leisure satisfaction and happiness: a function of leisure activity, *Kaohsiung Journal of Medical Sciences*, 10, 89-96.

Lutwak, N. and Ferrari, J.R. (1996), Moral affect and cognitive processes: differentiating shame from guilt among men and women, *Personality and Individual Differences*, 21, 891 -896.

Lutwak, N., Ferrari, J.R. and Cheek, J.M. (1998), Shame, guilt, and identity in men and women in the role of identity orientation and processing style in moral affects, *Personality and Individual Differences*, 25, 1027-1036.

Luyten, P, Corveleyn, J. and Fontaine, J.R.J. (1998), The relationship between religiosity and mental health: distinguishing between shame and guilt, *Mental Health, Religion and Culture*, 1, 165-184.

Lynn, R. (1959), Two personality characteristics related to academic achievement, *British Journal of Educational Psychology*, 29, 213-216.

Lynn, R. and Gordon, I.E. (1961), The relation of neuroticism and extraversion to intelligence and educational attainment, *British Journal of Educational Psychology*, 31, 114-203.

Lyon, J.L., Gardner, J.W., Klauber, M.R. and Smart, C.R. (1977), Low cancer incidence and mortality in Utah, *Cancer*, 39, 2608-2618.

Lyon, J.L., Klauber, M.R., Gardner, J.W. and Smart, C.R. (1976), Cancer incidence in Mormons and non-Mormons in Utah, 1966-1970, *New England Journal of Medicine*, 294, 129-133.

Lyon, J.L., Wetzler, H.P., Gardner, J.W., Klauber, M.R. and Williams, R.R. (1978), Cardiovascular mortality in Mormons and non-Mormons in Utah, 1969-1971, *American Journal of Epidemiology*, 108, 357-366.

McAdams, D.P. (1997), A conspetual history of personality psychology in R. Hogan, J. Johnson and S. Briggs (eds), *The Handbook of Personality Psychology*, pp. 3-39, London, Academic Press.

- McAllister, E.W.C. (1982), The self-concept structure of evangelical/fundamentalist ministry, *Journal of Psychology and Christianity*, 1, 14-20.
- McClelland, D.C. (1961), *The Achieving Society*, Princeton, New Jersey, Van Nostrand.
- McClelland, D.C., Atkinson, J.W., Clark, A. and Lowell, E.L. (1953), *The Achievement Motive*, New York, Appleton Century Crofts.
- McConahay, J.B. and Hough, J.C. (1973), Love and guilt-oriented dimensions of Christian belief, *Journal for the Scientific Study of Religion*, 12, 53-64.
- McDougall, W. (1926), *Outline of Abnormal Psychology*, New York, Scribner.
- McGuire, P.J., Mowbray, R.M. and Vallance, R.C. (1963), The Maudsley Personality Inventory used with psychiatric inpatients, *British Journal of Psychology*, 54, 157-166.
- McKelvie, S.J. and Daoussis, L. (1982), Extraversion and attitude towards capital punishment, *Personality and Individual Differences*, 3, 341-342.
- McKenna, R.H. (1976) Good Samaritanism in rural and urban settings: a nonreactive comparison of helping behavior of clergy and control subjects, *Representative Research in Social Psychology*, 7, 58-65.
- McKerracher, D.W. and Watson, R.A. (1968), The Eysenck Personality Inventory in male and female subnormal psychopaths in a special security hospital, *British Journal of Clinical Psychology*, 7, 295-302.
- McNamara, P.H., St George, A. (1978), Blessed are the downtrodden? an empirical test, *Sociological Analysis*, 29, 303-320.
- McNeel, S.P. and Thorsen, P.L. (1985), A developmental perspective on Christian faith and dogmatism, *High School Journal*, 68, 211-220.
- MacDonald, A.P. (1970), Revised scale for ambiguity tolerance: reliability and validity, *Psychological Reports*, 26, 791-798.
- Malinowski, B. (1925), Magic, science and religion, in J Needham (ed), *Science, religion and reality*, pp. 18-94, New York, Macmillan.
- Maltby, J. (1995a), Frequency of church attendance and obsessive actions among English and US adults, *Journal of Psychology*, 129, 599-600.
- Maltby, J. (1995b), Personality, prayer and church attendance among US female adults, *Journal of Social Psychology*, 135, 529-531.

Maltby, J. (1997), Personality correlates of religiosity among adults in the Republic of Ireland, *Psychological Reports*, 81, 827-831.

Maltby, J. (1999), Religious orientation and Eysenck's personality dimensions: the use of the amended religious orientation scale to examine the relationship between religiosity, psychoticism, neuroticism and extraversion, *Personality and Individual Differences*, 26, 79-84.

Maltby, J., McCollam, P. and Millar, D. (1994), Religiosity and obsessionality: a refinement, *Journal of Psychology*, 128, 609-611.

Maltby, J., Talley, M., Cooper, C. and Leslie, J.C. (1995), Personality effects in personal and public orientations toward religion, *Personality and Individual Differences*, 19, 157-163.

Mangis, M.W. (1995), Religious beliefs, dogmatism, and attitudes toward women, *Journal of Psychology and Christianity*, 14, 13-25.

Mantech, T (1980), *Work Values Questionnaire*, Auckland New Zealand.

Marchant-Haycox, S.E. and Wilson, G.D. (1992), Personality and stress in performing artists, *Personality and Individual Differences*, 13, 1061-1068.

Martin, A.O, Dunn, J.K., Simpson, J.L, Olsen, C.L., Kemel, S., Grace, M., Elias, S., Sarto, G.E, Smalley, B and Steinberg, A.G (1980), Cancer mortality in a human isolate, *Journal of the National Cancer Institute*, 65, 1109-1113.

Martin, N.G., Eaves, L.J. and Fulker, D.W. (1979), The general relationship of impulsiveness and sensation seeking to Eysenck's personality dimensions, *Acta Genet Med Gemellol*, 28, 197-210.

Masling, J., Rabie, L. and Blondheim, S.H. (1967), Obesity, level of aspiration, and Rorshach and TAT measures of oral dependence, *Journal of Consulting Psychology*, 31, 233-239.

Maslow, A.H. (1942), *Social Personality Inventory for College Women*, Stanford California, Stanford University Press.

Maslow, A.H. (1952) *Security-Insecurity: Manual*, Palo Alto, California, Consulting Psychological Press.

Maslow, A.H. (1964), *Religions, Values, and Peak-experiences*, Columbus, Ohio State University.

Matheny, K.B., Curlette, W., Aycok, D.W., Pugh, J.L. and Taylor, H.F. (1981), Coping Resources Inventory for Stress, Unpublished manuscript, Georgia State University, Department of Counseling and Psychological Services, Atlanta.

Matthews, D.A., McCullough, M.E., Larson, D.B., Koenig, H.G., Swyers, J.P. and Milano, M.G. (1998), Religious commitment and health status: a review of the research and implications for family medicine, *Archives of Family Medicine*, 7, 118-124.

Mauger, P.A., Adkinson, D., Hernandez, S.K., Hook, D. and Firestone, G. (1978), *Can assertiveness be distinguished from aggressiveness using self-report data?* Paper presented to the meeting of the American Psychological Association, Toronto.

Mayer, A.J. and Sharp, H. (1962), Religious preference and worldly success, *American Sociological Review*, 27, 218-227.

Medalie, J.H, Kahn, H.A, Neufeld, H.N, Riss, E. and Goldbourt, U. (1973), Five-year myocardial infarction incidence II: association of single variables to age and birthplace, *Journal of Chronic Disease*, 26, 329-349.

Meek, K.R., Albright, J.S. and McMinn, M.R. (1995), Religious orientation, guilt, confession, and forgiveness, *Journal of Psychology and Theology*, 25, 190-197.

Meisenhelder, J.B. (1986), Self-esteem in women: the influence of employment and perception of husband's appraisals, *Image Journal of Nursing Scholarship*, 18, 8-14.

Meredith, G.M. (1968), Personality correlates to religious belief Systems, *Psychological Reports*, 23, 1039-1042.

Merten, T. and Ruch, W. (1996), A comparison of computerized and conventional administration of the German versions of the Eysenck Personality Questionnaire and the Carroll Rating Scale for depression, *Personality and Individual Differences*, 20, 281-291.

Miller, A.S. and Hoffmann, J.P. (1995), Risk and religion: an explanation of gender differences in religiosity, *Journal for the Scientific Study of Religion*, 34, 63-75.

Mirels, H.L. and Garrett, J.B. (1971), The Protestant ethic as a personality variable, *Journal of Consulting and Clinical Psychology*, 36, 40-44.

Moore, K. and Stoner, S. (1977), Adolescent self-reports and religiosity, *Psychological Reports*, 41, 55-56.

Moorehouse, R.E, Farley, F.H. and Youngquist, J.V. (1990), Type T personality and the Jungian classification system, *Journal of Personality Assessment*, 54, 231-235.

Morris, P.A. (1982), The effect of pilgrimage on anxiety, depression and religious attitudes, *Psychological Medicine*, 12, 291-294.

Mowbray, R.M. and Davies, B.M. (1968), Scores obtained by Australian medical students on the Eysenck Personality Inventory, *Australian Journal of Psychology*, 20, 59-61.

Mullen, K. (1990), Religion and health: a review of the literature, *International Journal of Sociology and Social Policy*, 10, 85-96.

Muris, P., Schmidt, H., Merckelbach, H., And Rassin, E. (2000), Reliability, factor structure and validity of the Dutch Eysenck Personality Profiler, *Personality and Individual Difference*, 29, 857-868.

Murray, C. (1974), Item analysis of the elementary school form of the dogmatism scale, *Journal of Experimental Education*, 42, 50-54.

Musson, D.J. (1998), The personality profile of male Anglican clergy in England: the 16PF, *Personality and Individual Differences*, 25, 689-698.

Myers, D.G. (1996), *Social Psychology*, London, The McGraw-Hill Companies Inc.

Najman, J.M., Williams, G.M., Keeping, J.D., Morrison, J. and Andersen, M. (1988), Religious values, practices and pregnancy outcomes: a comparison of the impact of sect and mainstream Christian affiliation, *Social Science and Medicine*, 26, 401-407

Nauss, A.H. (1972a), Personality stability and change among ministerial students, *Religious Education*, 67, 469-475.

Nauss, A.H. (1972b), Problems in measuring ministerial effectiveness, *Journal for the Scientific Study of Religion*, 11, 141-151.

Nelson, P.B. (1990), Religious orientation of the elderly: relationship to depression and self esteem, *Journal of Gerontological Nursing*, 16, 2, 29-35.

Noor, N.M. (1993), Work and family roles in relation to women's wellbeing, unpublished D.Phil. dissertation, University of Oxford.

North, R. D. (1949), An analysis of the personality dimensions of introversion – extraversion, *Journal of Personality*, 17, 352 – 367.

O'Reilly, C.T. (1957), Religious practice and personal adjustment of older people, *Sociology and Social Research*, 42, 119-121.

Ogata, M, Ikeda, M and Kuratsune, M (1984), Mortality among Japanese Zen priests,

*Journal of Epidemiology and Community Health*, 38, 161-166.

Ortet, G., Ibanez, M.I., Moro, M., Silva, F. and Boyle, G.J. (1999), Psychometric appraisal of Eysenck's revised psychoticism scale: a cross-cultural study, *Personality and Individual Differences*, 27, 1209-1219.

Osgood, C.E., Suci, G.J. and Tannenbaum, P.H. (1957), *The Measurement of Meaning*, Urbana, Illinois, University of Illinois Press.

Pallone, N.J. and Banks, R.R. (1968), Vocational satisfaction among ministerial students, *Personnel and Guidance Journal*, 5, 870-875.

Paloutzian, R.F., Jackson, S.L. and Crandall, J.E. (1978), Conversion experience, belief system, and personal and ethical attitudes, *Journal of Psychology and Theology*, 6, 266-275.

Pan, W.H., Chin, C.J., Sheu, C.T. and Lee, M.H. (1993), Hemostatic factors and blood lipids in young Buddhist vegetarians and omnivores, *American Journal of Clinical Nutrition*, 58, 354-359.

Patrick, J. (1991), Personality characteristics of male and female pastoral candidates, *Journal of Psychology and Theology*, 19, 186-196.

Pattie, A. H. and Gilleard, C. J. (1979), *Manual for the Clifton Procedures for the Elderly (CAPE)*, London, Hodder & Stoughton.

Pearlin, L.I. and Schooler, C. (1978), The structure of coping, *Journal of Health and Social Behaviour*, 19, 2-21.

Pearson, P.R. (1989), Psychoticism and spiral maze performance in elderly psychiatric patients, *Personality and Individual Differences*, 10, 371-372.

Pearson, P.R. (1990a), Impulsiveness and spiral maze performance in elderly psychiatric patients, *Personality and Individual Differences*, 11, 1309-1310.

Pearson, P.R. (1990b), Is personality related to behavioural disability in the elderly? *Personality and Individual Differences*, 11, 1189-1190

Pearson, P.R., Francis, L.J. and Lightbown, T.J. (1986), Impulsivity and religiosity, *Personality and Individual Differences*, 7, 89-94.

Peterson, L.R. and Roy, A. (1985), Religiosity, anxiety, and meaning and purpose: religion's consequences for psychological wellbeing, *Review of Religious Research*, 27, 49-62.

- Petrie, A. (1942), Regression and suggestibility as related to temperament, *Journal of Personality*, 10, 445-448.
- Pfister, O. (1948), *Christianity and Fear*, New York, Macmillan.
- Phillips, R.L and Snowdon, D.A. (1983), Association of meat and coffee use with cancer of the large bowel, breast, and prostate among Seventh-Day Adventists: preliminary results, *Cancer Research*, 43, supplement, 2403-2408.
- Phillips, R.L., Kuzma, J.W., Beeson, W.L. and Lotz, T. (1980), Influence of selection versus lifestyle on risk of fatal cancer and cardiovascular disease among Seventh-day Adventists, *American Journal of Epidemiology*, 112, 296-314.
- Phillips, R.L., Lemon, F.R., Beeson, W.L. and Kuzma, J.W. (1978), Coronary heart disease mortality among Seventh-day Adventists with differing dietary habits, *American Journal of Clinical Nutrition*, 31, pp. S191 - 198.
- Philp, H. L. (1956), *Freud and religious belief*, London, Camelot Press Ltd.
- Pino, C.J. (1980), Interpersonal needs, counsellor style, and personality change among seminarians during the 1970s, *Review of Religious Research*, 21, 351-367.
- Plant, W.T., Telford, C.W. and Thomas, J.A. (1965), Some personality differences between dogmatic and non-dogmatic groups, *Journal of Social Psychology*, 67, 67-75.
- Poloma, M.M. and Pendleton, B.F. (1989), Exploring types of prayer and quality of life: a research note, *Review of Religious Research*, 31, 4-53.
- Poloma, M.M. and Pendleton, B.F. (1990), Religious domains and general well-being, *Social Indicators Research*, 22, 255-276.
- Poloma, M.M. and Pendleton, B.F. (1991), The effects of prayer and prayer experiences on general wellbeing, *Journal of Psychology and Theology*, 19,71-83.
- Poppleton, P.K. and Pilkington, G.W. (1963), The measurement of religious attitudes in a university population, *British Journal of Social and Clinical Psychology*, 2, 20-36.
- Poythress, N.G. (1975), Literal, antiliteral, and mythological religious orientations, *Journal for the Scientific Study of Religion*, 14, 271-284.
- Primavera, L.H., Tantillo, J. and DeLisio, T. (1980), Religious orientation, religious behaviour, and dogmatism as correlates of irrational beliefs, *Rational Living*, 15, 35-37.

- Putnins, A.L. (1982), The Eysenck Personality Questionnaires and delinquent prediction, *Personality and Individual Differences*, 3, 339-340.
- Quello, D.Y. (1970), A comparative investigation of the personality profiles of CPE and non CPE theological students, *Journal of Pastoral Care*, 24, 240-243.
- Rabinowitz, W. (1957), Anality, aggression, and acquiescence, *Journal of Abnormal and Social Psychology*, 54, 140-142.
- Raine, A. and Manders, D. (1988), Schizoid personality, inter-hemispheric transfer, and left hemisphere over-activation, *British Journal of Clinical Psychology*, 27, 333-347.
- Rankin, H., Stockwell, T. and Hodgson, R. (1982), Personality and alcohol dependence, *Personality and Individual Differences*, 3, 145-151.
- Rasannen, J., Kauhanen, J., Lakka, T.A., Kaplan, G.A. and Salonen, J.T. (1996), Religious affiliation and all-cause mortality: a prospective population study in middle-aged men in Eastern Finland, *International Journal of Epidemiology*, 25, 1244-1249.
- Raschke, V. (1973), Dogmatism and committed and consensual religiosity, *Journal for the Scientific Study of Religion*, 12, 339-344.
- Raven, J.C. (1938), *Progressive Matrices*, London, Lewis.
- Raven, J.C. (1965), *The Mill-Hill Vocabulary Scale*, London, Lewis.
- Reed, K. (1991), Strength of religious affiliation and life satisfaction, *Sociological Analysis*, 52, 205-210
- Richards, P.S. (1991), Religious devoutness in college students: relations with emotional adjustment and psychological separation from parents, *Journal of Counselling Psychology*, 38, 189-196.
- Richek, H.G., Mayo, C.D. and Puryear, H.B. (1970), Dogmatism, religiosity and mental health in college students. *Mental Hygiene*, 54, 572-574.
- Rickner, R.O. and Tan, S.Y. (1994), Psychopathology, guilt, perfectionism, and family of origin functioning among Protestant clergy, *Journal of psychology and Theology*, 22, 29-38.
- Rim, Y. (1961), Dimensions of job incentive and personality, *Acta Psychologica*, 18, 332-336.

- Rim, Y. (1964), Personality and group decisions involving risk, *Psychological Record*, 14, 37-45.
- Rim, Y. (1984), Explanations for poverty: personality aspects, *Personality and Individual Differences*, 5, 123-124.
- Rim, Y. (1993), Happiness and coping styles, *Personality and Individual Differences*, 14, 617-618.
- Robbins, M. and Francis, L.J. (1996), Are religious people happier? a study among undergraduates, in L.J. Francis, W.K. Kay and W.S. Campbell (eds), *Research in Religious Education*, pp. 207-217, Leominster, Gracewing.
- Robbins, M., Francis, L.J., Haley, J. M. and Kay, W. K. (2001), The personality characteristics of Methodist ministers: feminine men and masculine women?, *Journal for the Scientific Study of Religion*, 40, 123-128.
- Robbins, M., Francis, L.J. and Rutledge, C. (1997), The personality characteristics of Anglican stipendiary parochial clergy in England: gender differences revisited, *Personality and Individual Differences*, 23, 199-204.
- Robbins, M., Hair, J. and Francis, L.J. (1999), Personality and attraction to the charismatic movement: a study among Anglican clergy, *Journal of Beliefs and Values*, 20, 239-246.
- Roberts, F.J. (1965), Some psychological factors in religious conversion, *British Journal of Social and Clinical Psychology*, 4, 185-187.
- Robinson, T.N. (1990), Eysenck personality measures and religious orientation, *Personality and Individual Differences*, 11, 915-921.
- Rocklin, T. and Revelle, W. (1981), The measurement of extraversion: a comparison of the Eysenck Personality Inventory and the Eysenck Personality Questionnaire, *British Journal of Social Psychology*, 20, 279-284.
- Roger, D. and Morris, J. (1991), The internal structure of the EPQ scales, *Personality and Individual Differences*, 12, 759-764.
- Roger, D. and Nesshoever, W. (1987), The construction and preliminary validation of a scale for measuring emotional control, *Personality and Individual Differences*, 8, 527-534.
- Roid, G. H. and Fitts, W. H. (1988), *Tennessee self-concept scale* (revised manual), Los Angeles, Western Psychological services.
- Rokeach, M. (1960), *The open and closed mind*. New York: Basic Books.

- Rokeach, M. (1969), Value systems and religion, *Review of Religious Research*, 11, 2-23.
- Rosen, B. C. (1959), Race, ethnicity, and the achievement syndrome, *American Sociological Review*, 24, 47-60.
- Rosenberg, M. (1965), *Society and the Adolescent Self-image*, Princeton, New Jersey, Princeton University Press.
- Sanavio, E. (1988), Obsessions and compulsions: the Podua inventory, *Behaviour Research and Therapy*, 26, 169-177.
- Sandler, J. and Hazari, A. (1960), The obsessional: on the psychological classification of obsessional character traits and symptoms, *British Journal of Medical Psychology*, 33, 113-122.
- San-Martini, P. and Mazzoti, E. (1990), Relationship between the factorial dimensions of the Strelau Temperament Inventory and the EPQR, *Personality and Individual Differences*, 11, 909-914.
- San-Martini, P., Mazzoti, E. and Setaro, S. (1996), Factor structure and psychometric features of the Italian Version for the EPQ-R, *Personality and Individual Differences*, 21, 877-882.
- Savage, R.D. (1962), Personality factors and academic performance, *British Journal of Educational Psychology*, 32, 251-253.
- Schaefer, C.A. and Gorsuch, R.L. (1991), Psychological adjustment and religiousness: the multivariate belief motivation theory of religiousness, *Journal for the Scientific Study of Religion*, 30, 448-461.
- Schaefer, L.E., Drachman, S.R., Steinberg, A.G. and Adlersberg, D. (1953), Genetic studies on hypercholesteremia, *American Heart Journal*, 46, 99-116.
- Scheier, I. and Cattell, R. (1960), *Handbook and test kit for the IPAT anxiety battery*, Institute for Personality and Ability Testing.
- Schiller, P.L. and Levin, J.S. (1988), Is there a religious factor in health care utilization? a review, *Social Science and Medicine*, 27, 1369-1379.
- Schlangen, J.A. and Davidson, J.D. (1985), Dogmatism and differential religious involvement, *Sociological Analysis*, 30, 164-175.
- Schmied, L.A. and Jost, K.J. (1994), Church attendance, religiosity and health, *Psychological Reports*, 74, 145-146.

Schulze, R.H.K. (1962), A shortened version of the Rokeach Dogmatism Scale, *Journal of Psychological Studies*, 13, 93-97.

Schuman, H. (1971), The religious factor in Detroit: review, replication and reanalysis, *American Sociological Review*, 36, 30-48.

Scordato, A. J. (1975), *A comparison of interest, personality and biographical characteristics of seminary persisters and non-persisters from St Pius x preparatory seminary*, Unpublished doctoral dissertation, Department of Guidance and Counselor Education.

Seaman, J.M., Michel, J.B. and Dillehay, R.C. (1971), Membership in orthodox Christian groups, adjustment and dogmatism, *Sociological Quarterly*, 12, 252-259.

Shapiro, S., Weinblatt, E., Frank, C.W. and Sager, R.V. (1969), Incidence of coronary heart disease in a population insured for medical care (HIP): myocardial infarction, angina pectons, and possible myocardial infarction, *American Journal of Public Health*, 59, supplement 2, 1-101.

Shatenstein, B. and Ghadirian, P. (1998), Influences on diet, health behaviours and their outcome in select ethnocultural and religious groups, *Nutrition*, 14, 223-230.

Shaver, Y.P., Lenauer, MA. and Sadd, S. (1980), Religiousness, conversion and subjective well-being: the healthy-minded religion of modern American women, *American Journal of Psychiatry*, 137,1563-1568.

Shaw, G.K. and Hare, E.H. (1965), The Maudsley Personality Inventory (short form): distribution of scores and test - retest reliabilities in an urban population, *British Journal of Psychiatry*, 111, 226-235.

Siegelmann, M. and Peck, R.F. (1960), Personality patterns related to occupational roles, *Genetic Psychology Monographs*, 61, 291-349.

Sieglman, A.W. (1962), A cross-cultural investigation of the relationship between religiosity, ethnic prejudice and authoritarianism, *Psychological Reports*, 11, 419-427.

Sieglman, A.W. (1963), A cross-cultural investigation of the relationship between introversion-extraversion, social attitudes and anti-social behaviour, *British Journal of Social and Clinical Psychology*, 2, 196-208.

Singh, U.P. (1966), Another study of a Hindi version of the Maudsley Personality Inventory (MPI), *Indian Psychological Review*, 3, 57-58.

Skyring, A., Modan, B., Crocetti, A. and Hammerstrom, C. (1963), Some epidemiological and familial aspects of coronary heart disease: report of a pilot study, *Journal of Chronic Disease*, 16,1267-1279.

Small, S.A., Zeldin, R.S. and Savin-Williams, R.C. (1983), In search of personality traits: a multi method analysis of naturally occurring prosocial and dominance behaviour, *Journal of Personality*, 51, 1-16.

Smith, C.B., Weigert, A.J. and Thomas, D.L. (1979), Self-esteem and religiosity: an analysis of Catholic adolescents from five cultures, *Journal for the Scientific Study of Religion*, 18, 51-60.

Smith, F. (1976), Index of Organizational Reactions, *JSAS Cat Sel Docum Psychol*, 6, 1265.

Smith, F. (1977), Work attitudes as predictors of attendance on a specific day, *Journal of Applied Psychology*, 62, 16-19.

Snowdon, D.A. (1988), Animal product consumption and mortality because of all causes combined, coronary heart disease, stroke, diabetes, and cancer in Seventh-Day Adventists, *American Journal of Clinical Nutrition*, 48, supplement 3, 739-748.

Snyder, M., Goldbourt, U., Medalie, J., Neufeld, M. and Oron, D. (1978), The low incidence of heart disease among religious Jews compared with non-religious, *Thora and Maaa*, 8, 35-40.

Sorokin, P. (1947), *Society, Culture and Personality*, New York, Harper and Row.

Sparrow, N.H. and Ross, J. (1964), The dual nature of extraversion: a replication, *Australian Journal of Psychology*, 16, 214-218.

Spielberger, C. D., Gorsuch, R. L. and Lushene, R. E. (1970), *Manual for the Trait-trait Anxiety Inventory*, Palo Alto, California, Consulting Psychologists Press.

Spilka, B. and Mullin, M. (1977), Personal religion and psychological schemata: a research approach to a theological psychology of religion, *Character Potential: a record of research*, 8, 57-66.

Spilka, B. and Reynolds, J.F. (1965), Religion and prejudice: a factor analytic study, *Review of Religious Research*, 6, 163-168.

Stanley, G. (1963a) Personality and attitude characteristics of fundamentalist university students, *Australian Journal of Psychology*, 15,199-200.

- Stanley, G. (1963b), Personality and attitude characteristics of fundamentalist theological students, *Australian Journal of Psychology*, 15, 121-123.
- Stanley, G. (1964), Personality and attitude correlates of religious conversion, *Journal for Scientific Study and Religion*, 4, 60-63.
- Stark, R. and Bainbridge, W. (1985), *The Future of Religions*, Berkeley, California, University of California Press.
- Stark, R. and Bainbridge, W. (1987), *A Theory of Religion*, New York, Peter Long.
- Steininger, M.P., Durso, B.E. and Pasquariello, C. (1972), Dogmatism and attitudes. *Psychological Reports*, 30, 151-157.
- Stephenson, W. (1953), *The study of behavior: Q- technique and its methodology*, Chicago, University Chicago Press.
- Stern, G. G., Stein, M. I. And Bloom, B. S. (1956), *Methods in Personality Assessment*, Glencoe, Ill, Free Press.
- Stewart, C. H. and Hemsley, D. R. (1984) Personality factors in the taking of criminal risks, *Personality and Individual Differences*, 5, 119-122.
- Stewart, J.C. (1990), Validation of a multi-dimensional assessment battery for ministerial candidates, Unpublished doctoral dissertation, Fuller Theological Seminary, DA1 51:3609B.
- Strack, F., Argyle, M. and Schwarz, N. (eds) (1991), *Subjective Well-being*, Oxford, Pergamon Press.
- Strawbridge, W.J., Shema, S.J., Cohen, R.D., Roberts, R.E. and Kaplan, G.A. (1998), Religiosity buffers effects of some stressors on depression but exacerbates others, *Journal of Gerontology*, 53, 3, 118-126.
- Strelau, J. and Zawadzki, B., (1997), Temperament and personality: Eysenck's three superfactors as related to temperamental dimensions. In H. Hyborg, *The Scientific Study of Human Nature: tribute to Hans J Eysenck at eighty*, pp 68-91, Oxford, Elsevier.
- Strickland, B.R. and Shaffer, S. (1971), I-E, I-E, and F, *Journal for the Scientific Study of Religion*, 10, 366-369.
- Strickland, B.R. and Weddell, S.C. (1972), Religious orientation, racial prejudice, and dogmatism: a study of Baptists and Unitarians, *Journal for the Scientific Study of Religion*, 11, 395-400.

- Strong, E. K. (1938-1959), *Strong Vocational Interest Blank for Men, Revised*, California Stanford University Press.
- Stryker, R. (1981), Religio-ethnic effects on attainments in the early career, *American Sociological Review*, 46, 212-231.
- Strunk, O. (1958a), Note on self-reports and religiosity, *Psychological Reports*, 4, 29.
- Strunk, O. (1958b), Relationship between self-reports and adolescent religiosity, *Psychological Reports*, 4, 683-686.
- Strunk, O. (1959), Interest and personality patterns of pre-ministerial students, *Psychological Reports*, 5, 740.
- Sturgeon, R.S. and Hamley, R.W. (1979), Religiosity and anxiety, *Journal of Social Psychology*, 108, 137-138.
- Swindell, D.H. and L'Abate, L. (1970), Religiosity, dogmatism, and repression-sensitization, *Journal for the Scientific Study of Religion*, 9, 249-251.
- Tangney, J.P., Wagner, P.E., Fletcher, C. and Gramzow, R. (1992), Shamed into anger? The relation of shame and guilt to anger and self-reported aggression, *Journal of Personality and Social Psychology*, 62, 669-675.
- Tangney, J.P., Wagner, P.E. and Gramzow, R. (1989), *The test of self-conscious affect*, Fair Fax VA: George Monson University.
- Tangney, J.P., Wagner, P.E. and Gramzow, R. (1992), Proneness to shame, proneness to guilt and psychopathology, *Journal of Abnormal Psychology*, 103, 469-478.
- Taylor, J.A. (1953), A personality scale of manifest anxiety, *Journal of Abnormal and Social Psychology*, 48, 285-290.
- Tellis-Nayak, V. (1982), The transcendent standard: the religious ethos of the rural elderly, *The Gerontologist*, 22, 359-363.
- Tennison, J.C. and Snyder, W.U. (1968), Some relationships between attitudes toward the church and certain personality characteristics, *Journal of Counseling Psychology*, 15, 187-189.
- Thalbourne, M.A., Dunbar, K.A. and Delin, P.S. 1995. An investigation into correlates of belief in the paranormal, *Journal of the American Society for Psychical Research*, 89, 215-231.

Thompson, A.D. (1974), Open-mindedness and indiscriminate antireligious orientation, *Journal for the Scientific Study of Religion*, 13, 471-477.

Thompson, E.H. (1991), Beneath the status characteristics: gender variations in religiousness, *Journal for the Scientific Study of Religion*, 30, 381-394.

Thorndike, R.L. (1966), *Manual Thorndike's Dimensions of Temperament*, New York, Psychological corporation.

Thorson, J.A. (1992), Another look at pastoral candidates' personality traits, *Journal of Psychology and Theology*, 20, 47-50.

Thorson, J.A. and Powell, F.C. (1988), Medical students' Edward Personal Preference Schedule norms, *Psychological Reports*, 63, 465-466.

Thorson, J.A. and Powell, F.C. (1991), Medical students' attitude toward aging and death: a cross – sequential study, *Medical Education*, 25, 32-37.

Thurstone, L.L. and Chave, E.J. (1929), *The Measurement of Attitude: a psychological method and some experiments with a scale of measuring attitude toward the church*, Chicago, Illinois, University of Chicago Press.

Tillich, P. (1981), *The meaning of health: relations of religion and health*, North Atlantic, Berkeley, California.

Tobacyk, J. and Milford, G. (1983), Belief in paranormal phenomena: assessment instrument development and implications for personality functioning, *Journal of Personality and Social Psychology*, 44, 1029-1037.

Torgersen, S. (1980), Heredity-environmental differentiation of general neurotic, obsessive and impulsive hysterical traits, *Acta Genetica Medicae et Gemellologiae*, 29, 193-207.

Towler, R. and Coxon, A.P.M. (1979), *The Fate of the Anglican Clergy*, London, Macmillan.

Troldahl, V.C. and Powell, F.A. (1965), A short-form dogmatism scale for use in field studies, *Social Forces*, 44, 211-214.

Troyer, H (1988), Review of cancer among 4 religious sects: evidence that life-styles are distinctive sets of risk factors, *Social Science and Medicine*, 26, 1007-1017.

Vanecko, J.J. (1966), Religious behaviour and prejudice: some dimensions and specifications of the relationship, *Review of Religious Research*, 8, 27-37.

Veevers, J. E. and Geeves, E. G. (1986), Playing it safe: accident mortality and gender roles, *Sociological Forces*, 19, 349-360.

Verma, R.M. and Eysenck, H.J. (1973), Severity and type of psychotic illness as a function of personality, *British Journal of Psychiatry*, 122, 573-585.

Veroff, J., Feld, S. and Gurin, G. (1962), Achievement motivation and religious background, *American Sociological Review*, 27, 205-217.

Wade, T.J., Thompson, V.I., Tashakkori, A. and Valente, E. (1989), A longitudinal analysis of sex by race differences in predictors of adolescent self-esteem, *Personality and Individual Differences*, 10, 717-779.

Wardwell, W.I., Bahnson, C.B. and Caron, H.S. (1963), Social and psychological factors in coronary heart disease, *Journal of Health and Human Behavior*, 4, 154-165.

Wardwell, W.I., Hyman, M. and Bahnson, C.B. (1968), Socio-environmental antecedents to coronary heart disease in 87 white males, *Social Science and Medicine*, 2, 165-183.

Watson, P.J., Hood, R.W., Morris, R.J., and Hall, J.R. (1985), Religiosity, sin and self-esteem, *Journal of Psychology and Theology*, 13, 116-128.

Watson, P.J., Morris, R.J. and Hood, R.W. (1987), Antireligious humanistic values, guilt and self-esteem, *Journal for the Scientific Study of Religion*, 26, 535-546.

Watson, P.J., Morris, R.J. and Hood, R.W. (1988a), Sin and self-functioning: part 1, grace, guilt and self-consciousness, *Journal of Psychology and Theology*, 16, 254-269.

Watson, P.J., Morris, R.J. and Hood, R.W. (1988b), Sin and self-functioning: part 2, grace, guilt and psychological adjustment, *Journal of Psychology and Theology*, 16, 270-281.

Watson, P.J., Morris, R.J. and Hood, R.W. (1988c), Sin and self-functioning: part 3, the psychology of ideology and irrational beliefs, *Journal of Psychology and Theology*, 16, 348-361

Watson, P.J., Morris, R.J. and Hood, R.W. (1989a), Sin and self-functioning: part 4, depression, assertiveness, and religious commitments, *Journal of Psychology and Theology*, 17, 44-58.

Watson, P.J., Morris, R.J. and Hood, R.W. (1989b), Intrinsicness, religious self-love, and narcissism, *Journal of Psychology and Christianity*, 8, 31-37.

- Wearing, A.G. and Brown, L.B. (1972), The dimensionality of religion, *British Journal of Social and Clinical Psychology*, 11,143-148.
- Weber, M. (1904), *The Protestant Ethic and the Spirit of Capitalism*, London, Allen and Unwin.
- Webster, A.C. (1967), Patterns and relations of dogmatism, mental health, and psychological health in selected religious groups, *Dissertation Abstracts*, 27, (12-A), 4142.
- Weima, J. (1965), Authoritarianism, religious conservatism, and sociocentric attitudes in Roman Catholic groups, *Human Relations*, 18, 231-239.
- Weller, L., Levinbok, S., Maimon, R. and Shaham, A. (1975), Religiosity and authoritarianism, *Journal of Social Psychology*, 95, 11-18.
- Westoff, C.F., Potter, P.G., Sagi, P.C. and Mishler, E.L. (1961), *Family growth in metropolitan America*, Princeton, New Jersey, Van Nostrand.
- White, F.J. (1988), Religious health and pathology in David G. Benner (ed), *Psychology and Religion*, pp. 108-114, Michigan: Maker Book House.
- White, J., Joseph, S. and Neil, A. (1995), Religiosity, psychoticism, and schizotypal traits, *Personality and Individual Differences*, 19, 847-851.
- White, J.H., Stephenson, G.M., Child, S.E.A. and Gibbs, J.M. (1968), Validation studies of the Eysenck Personality Inventory, *British Journal of Psychiatry*, 114, 63-68.
- Wickstrom, D.L. and Fleck, J.R. (1983), Missionary children: correlates of self-esteem and dependency, *Journal of Psychology and Theology*, 11, 226-235.
- Williams, P. Francis, A. and Durham, R. (1976) Personality and meditation, *Perceptual and Motor Skills*, 43, 787-792.
- Williams, R.L. and Coles, S. (1968), Religiosity, generalized anxiety, and apprehension concerning death, *Journal of Social Psychology*, 75, 111-117.
- Wilson, D J. and Doolabh, A. (1992), Reliability, factorial validity and equivalence of several forms of the Eysenck Personality Inventory/Questionnaire in Zimbabwe, *Personality and Individual Differences*, 13, 637-643.
- Wilson, G.D. and Jackson, C. (1994), The personality of physicists, *Personality and Individual Differences*, 16, 187-189.

Wilson, R.M. (1974), Persistence and change in the priestly role in relation to role satisfaction: a study of R.C. priests and ex-priests, Unpublished doctoral dissertation, New York University, DAI 35: 4267A.

Wilson, R. W. (1985), Christianity-biased and unbiased: dogmatism's relationships to different Christian commitments, including conversion, *High School Journal*, 68, 374-388.

Wilson, W. C. (1960), Extrinsic religious values and prejudice, *Journal of Abnormal Social Psychology*, 60, 286-288.

Wilson, W. and Miller, H.L. (1968), Fear, anxiety and religiousness, *Journal for the Scientific Study of Religion*, 7, 111.

Winkelstein, W. and Rekate, A.C. (1964), Age trend mortality from coronary artery disease in women and observations on the reproductive pattern of those affected, *American Heart Journal*, April, 481-488.

Wonderlic, E. (1992), *Wonderlic Personnel Test*, Illinois, Libertyville.

Wulff, D.M. (1991), *Psychology of Religion: classic and contemporary views*, New York, John Wiley and Sons.

Wynder, E.L, Lemon, F.R. and Bross, I.T. (1959), Cancer and coronary heart disease among Seventh-day Adventists, *Cancer*, 12, 1016-1028.

Yates, J.W., Chalmer, B.J., St James, P., Follansbee, M. and McKegney, F.P. (1981), Religion in patients with advanced cancer, *Medical and Paediatric Oncology*, 9, 121-128.

Yeung, R.R. and Hemsley, D.R. (1996), Effects of personality and acute exercise on mood states, *Personality and Individual Differences*, 20, 545-550.

Zackerl, M. (1984), The Job Function Questionnaire, *Unpublished paper*.

Zaleski, Z (1981), Psychoticism and marital satisfaction, *Personality and Individual Differences*, 2, 245-246.

Zautra, A.J. Guarnaccia, C.A. and Dohrenwend, B.P. (1986), Measuring small life events, *American Journal of Community Psychology*, 14, 629-655.

Zollinger, T W, Phillips, R L and Kuzma, J W (1984), Breast cancer survival rates among Seventh-Day Adventists and non-Seventh-Day Adventists, *American Journal of Epidemiology*, 119, 503-509.

Zuckerman, D.M., Kasl, S. and Ostfeld, A.M. (1984), Psychosocial predictors of mortality among the elderly poor: the role of religion, well-being and social contacts, *American Journal of Epidemiology*, 119, 410-423.

Zuckerman, M. (Ed), (1979), *Sensation seeking: beyond the optimal level of arousal*, Hillsdale, New Jersey, L Erlbaum Associates.

Zuckerman, M. (Ed), (1983a), *Biological basis of Sensation seeking, impulsivity and anxiety*, Hillsdale, New Jersey, L Erlbaum Associates.

Zuckerman, M. (Ed), (1983b), Sensation seeking and sports, *Personality Individual Differences*, 4, 285-292.

Zuckerman, M., Ball, S. and Black, J. (1990), Influences of sensation seeking, gender, risk appraisal and situational motivation on smoking, *Addictive Behaviors*, 15, 209-220.

Zuckerman, M. Link, K. (1968), Sensation Seeking Scale, *Journal of Consulting and Clinical Psychology*, 32, 420-426.

Zung, W.K. (1965), A self-rating depression scale, *Archives of General Psychiatry*, 12, 63-70.