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Exploring the factor structure of the Francis Psychological Type Scales (FPTS)
among a sample of Anglican clergy in England

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Abstract

The Francis Psychological Type Scales were designed to provide a fresh conceptualisation and operationalisation of psychological type theory suitable for application within self-report quantitative studies in the individual differences tradition. The present study tests the factor structure of this instrument among a sample of 722 Anglican clergy. The Varimax Rotated solution with Kaiser Normalisation recovered the hypothesised location of 74 of the 80 items across four factors with factor weightings of or above .38. The Francis Psychological Type Scales are commended for use.

Keywords: Psychological type, Francis Psychological Type Scales, factor structure, clergy studies.

Introduction

Psychological type theory offers an account of psychological individual differences that differs significantly (and controversially) from other well-established and widely-accepted models of personality in two ways. The models of personality proposed, for example, by Cattell, Eber, and Tatsuoka (1970) in terms of sixteen factors, by Costa and McCrae (1985) in terms of the “big five” factors, and by Eysenck and Eysenck (1991) in terms of the ‘major three’ dimensions all begin from the statistical reduction of observed patterns of connections in human behaviour and conceptualise individual differences in terms of location on continua. Thus, Eysenck and Eysenck (1964, 1975, 1991) consistently define a continuum from introversion through ambiversion, to extraversion and locate individuals on that continuum through their scores recorded on the Extraversion Scale.

First, psychological type theory, as originally proposed by Jung (1971) began from a theoretical analysis of human psychological functioning, grounded in careful clinical observations, that distinguishes between two core mental processes. The first process, the *perceiving* process concerned with observing the world, was styled by Jung on the irrational process, since it involved neither evaluation nor judgement. The second process, the *judging* process concerned with evaluating the observations generated by the perceiving process, was styled by Jung as the rational process precisely because it was involved in evaluation and judgement.

To these two distinct processes, Jung’s theory added a further factor concerned with identifying the source of psychological energy as residing either in the inner or introverted world or in the outer or extraverted world. In subsequent scholarship this distinction became clarified as the psychological *orientation* from which energy sources were sustained (see Francis, 2005). Introversion and extraversion were also important to Jung in a second sense as identifying the world in which the psychological processes were operated. For some

individuals the perceiving process was extraverted into the outer world, and for other individuals the judging process was extraverted into the outer world. In subsequent scholarship this distinction became clarified as the psychological *attitude* toward the outer world.

Second, psychological type theory as originally proposed by Jung (1971) conceptualised individual differences in terms of dichotomous typologies rather than continua. Thus for Jung, introversion and extraversion did not define opposite ends of a continuum along which individuals could be graded, but discrete categories into which individuals could be allocated. For Jung this notion of typology provided a sensible account of individual differences in respect of the perceiving process and in respect of the judging process. For Jung there were two ways of perceiving, styled as the sensing function and the intuition function, and there were two ways of judging, styled as the thinking function and the feeling function. Later scholars clarified the attitude toward the outer world in a similar dichotomous manner, distinguishing between the judging attitude (extraverting a judging function, either thinking or feeling) and the perceiving attitude (extraverting a perceiving function, either sensing or intuition).

The development and clarification of psychological type theory has been progressed by a series of psychometric instruments, including the Cambridge Type Inventory (Rawling, 1992), the Gray-Wheelwright Jungian Type Survey (Gray & Wheelwright, 1946), the Jung Type Indicator (Budd, 1997), the Keirsey Temperament Sorter (KTS) proposed by Keirsey and Bates (1978) and revised by Keirsey (1998), the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), the Personal Preferences Self-Description Questionnaire (Kier, Melancon, & Thompson, 1998), the Personality Style Inventory (Ware, Yokomoto, & Morris, 1985), the PET Type Check (Cranton & Knoop, 1995), the Singer-Loomis Inventory of Personality (Loomis, 1982), and the Type Differentiation Indicator (Mitchell, 1991). From among this

range of instruments the best-known and most-widely used is the Myers-Briggs Type Indicator (Myers & McCaulley, 1985). While this instrument may offer an excellent tool to form the foundation for individual consultation, it was not designed for economical and effective inclusion in self-completion surveys. A second well-known and well-used assessment of psychological type is offered by the Keirsey Temperament Sorter (Keirsey & Bates, 1978). While this instrument may offer an excellent tool for self-assessment, it was not designed for economical and effective inclusion in self-completion surveys. It was, therefore, the intention of Francis (2005) to develop a measure of psychological type that could fill this lacuna.

Developing the Francis Psychological Type Scales

The items proposed for the Francis Psychological Type Scales emerged from a slow process of reflecting on and refining the conceptualisation of the constructs and then identifying words or phrases that could exemplify these constructs. These words and phrases were discussed and debated with type-literate colleagues and explored empirically in a sequence of pilot studies. Since 1996 the items have remained constant and been used in a number of studies to develop comparable data (see, for example, recent special issues of journals within the psychology of religion and the social scientific study of religion edited by Village, 2011a; Lewis, 2012, 2015).

Introversion and extraversion are conceptualised in the following way. They describe the two preferred orientations of the inner world and the outer world. Introverts prefer to focus their attention on the inner world of ideas and draw their energy from that inner world. When introverts are tired and need energising they look to the inner world. Extraverts prefer to focus their attention on the outer world of people and things and draw their energy from that outer world. When extraverts are tired and need energising they look to the outer world.

Sensing and intuition are conceptualised in the following way. They describe the two

preferences associated with the *perceiving process*. They describe different preferences used to acquire information. Sensing types focus on the realities of a situation as perceived by the senses. Intuitive types focus on the possibilities, meanings and relationships, the ‘big picture’ that goes beyond sensory information.

Thinking and feeling are conceptualised in the following way. They describe the two preferences associated with the *judging process*. They describe different preferences by which decisions are reached. Individuals who prefer thinking make decisions based on objective, logical analysis. Individuals who prefer feeling make decisions by subjective values based on how people will be affected.

Judging and perceiving are conceptualised in the following way. They describe the two preferred attitudes toward the outer world. Individuals who prefer to relate to the outer world with a judging process present a planned and orderly approach to life. They prefer to have a settled system in place and display a preference for closure. Individuals who prefer to relate to the outer world with a perceiving process present a flexible and spontaneous approach to life. They prefer to keep plans and organisations to a minimum and display a preference for openness.

Psychological type and the psychology of religion

The Francis Psychological Type Scales were developed originally to provide a convenient self-completion instrument that could advance theory and empirical research within the social scientific study of religion in general, and the psychology of religion and empirical theology in particular (Francis, 2005, 2009). Three main groups of studies have now employed this instrument to profile religious professionals, to map the psychological correlates of work-related psychological health among religious professionals, and to profile religious congregations. Other studies have employed the instrument more widely to explore the psychological type correlates of a range of variables concerned with religiosity or

spirituality.

Studies that have employed the Francis Psychological Type Scales to map the profile of religious professionals include surveys conducted among 134 lead elders within the Newfrontiers network of churches (Francis, Gubb, & Robbins, 2009), 101 Church of England clergy engaged in ministry as full-time hospital chaplains (Francis, Hancocks, Swift, & Robbins, 2009), 1,004 Methodist ministers in Britain (Burton, Francis, & Robbins, 2010), 231 Anglican clergymen serving in the Church in Wales (Francis, Littler, & Robbins, 2010), 39 Local Ordained Ministers serving in the Church of England (Francis & Holmes, 2011), 561 clergy serving in the Presbyterian Church (USA) (Francis, Robbins, & Wulff, 2011), 529 clergymen and 518 clergywomen ordained in the Anglican Church in the United Kingdom from 2004 to 2007 (Village, 2011b), 164 male apostolic network leaders (Kay, Francis, & Robbins, 2011), 154 leaders within the Newfrontiers network of churches (Francis, Robbins, & Ryland, 2012), 144 clergywomen serving in Local Ordained Ministry in the Church of England (Francis, Robbins, & Jones, 2012), 306 Catholic priests serving in Australia (Francis, Powell, & Robbins, 2012), 56 clergymen and 79 clergywomen serving in Local Ordained Ministry in the Church of England (Francis & Village, 2012), 845 lay church leaders in Australia (Powell, Robbins, & Francis, 2012), 55 Catholic priests serving in the USA (Burns, Francis, Village, & Robbins, 2013), 168 bishops, serving or retired, in the Church of England (Francis, Whinney, & Robbins, 2013), 155 volunteer Christian youth leaders in Northern Ireland (Hamill & Francis, 2013), 236 readers serving in the Church of England (Francis, Jones, & Robbins, 2014), 89 clergymen and 26 clergymen serving in the Reformed Church in America (Royle, Norton, & Larkin, 2015), 117 Singaporean Pentecostal pastors (Robbins & Kay, 2015), 155 Catholic priests serving in Italy (Francis & Crea, 2015a), 268 Anglican clergymen serving in the Church in Wales (Payne & Lewis, 2015), 120 clergywomen and 436 clergymen from Protestant denominations in Australia (Robbins &

Powell, 2015), 336 Canadian Baptist youth leaders (Francis, Fawcett, Linkletter, Robbins, & Stairs, 2016).

Studies that have employed the Francis Psychological Scales to map the psychological correlates of work-related psychological health among religious professionals include surveys conducted among 748 clergy serving in the Presbyterian Church (USA) by (Francis, Wulff, & Robbins, 2008), 3,715 clergy from Australia, England and New Zealand (Francis, Robbins, Kaldor, & Castle, 2009), 521 clergy serving in rural ministry in the Church of England (Brewster, Francis, & Robbins, 2011), 874 clergywomen serving in the Church of England (Robbins & Francis, 2010), 134 lead elders within the Newfrontiers network of churches serving in the United Kingdom (Francis, Gubb, & Robbins, 2012), 212 Australian clergywomen drawn from 14 denominations or streams of churches (Robbins, Francis, & Powell, 2012), 266 clergymen serving in the Church in Wales (Francis, Payne, & Robbins, 2013), 155 Catholic priests serving in Italy (Francis & Crea, 2015b), and 589 Canadian Baptist clergy (Durkee-Lloyd, 2016).

Studies that have employed the Francis Psychological Type Scales to map the profile of church congregations include surveys conducted among 3,304 participants attending 140 Anglican congregations in England (Francis, Robbins, & Craig, 2011), 1,527 churchgoers from a range of different Christian denominations in Australia (Robbins & Francis, 2011), 1,474 churchgoing Roman Catholics in Australia (Robbins & Francis, 2012), 1,156 churchgoers from a range of Christian denominations in England (Village, Baker, & Howat, 2012), and 105 Greek Orthodox churchgoers in London (Lewis, Varvatsoulis, & Williams, 2012). Building on such studies of regular congregations three recent studies have reported on the psychological type profile of participants engaged in various forms of Fresh Expressions of Church (Francis, Clymo, & Robbins, 2014; Village, 2015; Francis, Wright, & Robbins, 2016). A second set of studies has reported on the psychological type profile of

participants engaged in cathedral congregations (Lankshear & Francis, 2015; Walker, 2012). A third set of studies has set churchgoers alongside Muslims (Francis & Dato, 2012), online atheists (Baker & Robbins, 2012), and those engaged in the “Church of Implicit Religion” (Francis & ap Siôn, 2013).

This range of studies has provided a good basis on which to test and to report on the internal consistency reliability of the Francis Psychological Type Scales across a range of different groups. Overall these four underlying scales (orientations, E and I; perceiving process, S and N; judging process, T and F; attitude, J and P) have generated alpha coefficients (Cronbach, 1951) well in excess of the threshold recommended by DeVellis (2003). For example, in Australia among 212 clergywomen from 14 denominations, Robbins, Francis, and Powell (2012) reported alpha coefficients of .84 for the EI Scale, .79 for the SN Scale, .71 for the TF Scale, and .81 for the JP Scale. In England among 1,047 Anglican clergy, Village (2011b) reported alpha coefficients of .85 for the EI Scale, .77 for the SN Scale, .72 for the TF Scale, and .81 for the JP Scale. In the USA among 748 clergy serving within the Presbyterian Church (USA), Francis, Wulff, and Robbins (2008) reported alpha coefficients of .85 for the EI Scale, .76 for the SN Scale, .72 for the TF Scale, and .79 for the JP Scale. As yet, however, no study has reported on the factor structure of the Francis Psychological Type Scales.

Research question

Against this background, the aim of the present study is to test the factor structure of the Francis Psychological Type Scales among a sample of Anglican clergy. This is an appropriate population for such a study, given the primary usage of the Francis Psychological Type Scales to date within the psychology of religion and empirical theology.

Method

Procedure

A detailed questionnaire was sent to a random sample of Anglican clergy serving in rural multi-church benefices within England. Participation was entirely voluntary and participants were assured of anonymity and confidentiality.

Measures

Psychological type was assessed by the Francis Psychological Type Scales (FPTS; Francis, 2005). This is a self-report, pencil and paper instrument which comprises 40 items to distinguish between the two orientations (E and I), the two perceiving functions (S and N), the two judging functions (T and F) and the two attitudes toward the outside world (J and P). Each item consists of contrasting pairs of characteristics, and participants are invited to select the characteristics which they feel best represent their personal preferences. The FPTS uses a forced-choice format.

Sample

The 722 participants comprised 540 men and 182 women; 31 participants were in their thirties, 156 were in their forties, 299 were in their fifties, 226 were in their sixties, and 10 were in their seventies. Regarding marital status, 614 were married (including 31 who were divorced and remarried and 6 who were widows and remarried), 23 were widowed, 22 were divorced, 4 were separated, 1 was living in a same-sex relationship, and 5 did not disclose their marital status.

Analysis

Classic exploratory factor analysis (Varimax Rotated solution with Kaiser Normalisation) was employed, rather than confirmatory factor analysis, in order to explore how much of the hypothesised structure of the 40 pairs of items could be recovered by this procedure.

Results

- insert table 1 about here -

Table 1 presents the factor structure of the 40 pairs of items proposed by the Francis Psychological Type Scales, employing the Varimax Rotated solution with Kaiser Normalisation. These data demonstrate that 74 of the 80 items were located within the hypothesised four factor structure of the instrument with loadings of or above .38 on the hypothesised factors.

Conclusion

The present study set out to test the factor structure of the Francis Psychological Type Scales among a sample of 722 Anglican clergy, employing classic exploratory factor analysis (the Varimax Rotated solution with Kaiser Normalisation). Using this exploratory technique demonstrated that an unusually high proportion of the 80 items were located within the hypothesised structure of the instrument with factor loadings of or above .38.

In terms of the judging process, all ten hypothesised pairs of items were drawn together on factor four. According to this factor, thinking types tend to be firm (.62), analytic (.57), critical (.54), logical (.54), sceptical (.48), fairminded (.48), truthful (.45), concerned for justice (.44), seek for truth (.41) and prefer thinking (.38). Feeling types tend to be gentle (.62), sympathetic (.57), affirming (.54), humane (.54), trusting (.48), warm-hearted (.48), tactful (.45), concerned for harmony (.44), seek for peace (.41), and prefer feeling (.38).

In terms of the perceiving process, nine of the ten hypothesised pairs of items were drawn together on factor two. According to this factor, sensing types prefer the concrete (.68), prefer facts (.65), are practical (.61), sensible (.57), conventional (.56), down to earth (.53), focused on present realities (.52), prefer to make (.48), and are concerned about details (.46). Intuitive types prefer the abstract (.68), prefer theories (.65), are inspirational (.61), imaginative (.57), inventive (.56), up in the air (.53), focused on future possibilities (.52), prefer to design (.48), and are concerned for meaning (.46). While the other pair of items

loaded on the hypothesised factor - keep things as they are (.21) on sensing and improve things (.21) on intuition - the loadings were not strong.

In terms of the orientations, nine of the ten hypothesised pairs of items were drawn together on factor one. According to this factor, introverts tend to be private (.79), recognise themselves as introverts (.75), are socially detached (.69), reserved (.65), drained by too many people (.61), dislike parties (.59), are reflective (.50), prefer working alone (.49), and prefer having a few deep friendships (.44). Extraverts tend to be sociable (.79), recognise themselves as extraverts (.75), are socially involved (.69), talkative (.65), energised by others (.61), like parties (.59), are active (.50), and prefer having many friends (.44). While the other pair of items loaded on the hypothesised factor - think before speaking (.24) on introversion and speak before thinking (.24) on extraversion - the loadings were not strong.

In terms of the attitudes toward the outer world, nine of the ten hypothesised pairs of items were drawn together on factor three. According to this factor, judging types are organised (.75), systematic (.70), orderly (.65), structured (.63), prefer to act on decisions (.61), like detailed planning (.50), like certainty (.43), are happy with routine (.41), and are punctual (.40). Perceiving types are spontaneous (.75), casual (.70), easygoing (.65), open-ended (.63), tend to act on impulse (.61), dislike detailed planning (.50), are happy with uncertainty (.43), unhappy with routine (.41), and are leisurely (.40). While the other pair of items loaded on the hypothesised factor - like to be in control (.19) on judging and like to be adaptable (.19) on perceiving - not only were the loadings not strong, these items also loaded more strongly on the judging function than on the attitudes.

These analyses largely support the factor structure of the Francis Psychological Type Scales and commend the instrument for further use. There are, however, three pairs of items that require further scrutiny. If these three pairs of items were to emerge as relatively weak in

replication studies conducted among different samples, there may be value in developing, exploring, and testing replacement items.

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Table 1

Rotated factors

	factor 1	factor 2	factor 3	factor 4
<i>Extraversion</i>				
Active	.50			
Sociable	.79			
Having many friends	.44			
Like parties	.59			
Energised by others	.61			
Working in groups	.49			
Socially involved	.69			
Talkative	.65			
An extravert	.75			
Speak before thinking	.24			
<i>Introversion</i>				
Reflective	-.50			
Private	-.79			
A few deep friendships	-.44			
Dislike parties	-.59			
Drained by too many people	-.61			
Working alone	-.49			
Socially detached	-.69			
Reserved	-.65			
An introvert	-.75			
Think before speaking	-.24			
<i>Sensing</i>				
Facts		-.65		
Practical		-.61		
The concrete		-.68		
Prefer to make		-.48		
Conventional		-.56		
Concerned about details		-.46		
Sensible		-.57		
Focused on present realities		-.52		
Keep things as they are		-.21		
Down to earth		-.53		
<i>Intuition</i>				
Theories		.65		
Inspirational		.61		
The abstract		.68		
Prefer to design		.48		
Inventive		.56		
Concerned for meaning		.46		
Imaginative		.57		
Focused on future possibilities		.52		
Improve things		.21		
Up in the air		.53		

<i>Judging</i>		
Happy with routine	.41	
Structured	.63	
To act on decisions	.61	
In control	.19	.43
Orderly	.65	
Organised	.75	
Punctual	.40	
Like detailed planning	.50	
Certainty	.43	
Systematic	.70	
<i>Perceiving</i>		
Unhappy with routine	-.41	
Open-ended	-.63	
To act on impulse	-.61	
Adaptable	-.19	.43
Easygoing	-.65	
Spontaneous	-.75	
Leisurely	-.40	
Dislike detailed planning	-.50	
Uncertainty	-.43	
Casual	-.70	
<i>Thinking</i>		
Justice		.44
Analytic		.57
Thinking		.38
Tend to be firm		.62
Critical		.54
Logical		.54
Truthful		.45
Sceptical		.48
Seek for truth		.41
Fair-minded		.48
<i>Feeling</i>		
Harmony		-.44
Sympathetic		-.57
Feeling		-.38
Tend to be gentle		-.62
Affirming		-.54
Humane		-.54
Tactful		-.45
Trusting		-.48
Seek for peace		-.41
Warm-hearted		-.46

Note: All loadings below .38 have been suppressed for clarity of presentation except for those loadings on the hypothesised factors