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Psychological type and prayer preferences:
A study among Anglican clergy in the United Kingdom

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Summary

This study applies the framework of Jungian psychological type theory to define eight aspects of prayer preference, namely: introverted prayer, extraverted prayer, sensing prayer, intuitive prayer, feeling prayer, thinking prayer, judging prayer, and perceiving prayer. On the basis of data provided by 1,476 newly ordained Anglican clergy from England, Ireland, Scotland, and Wales eight seven-item scales were developed to access these aspects of prayer preferences. Significant correlations were found between each prayer preference and the relevant aspect of psychological type accessed by the Keirsey Temperament Sorter. These data support the theory that psychological type influences the way in which people pray.

Psychological type and prayer preferences:

A study among Anglican clergy in the United Kingdom

The study of prayer played a central and formative role in the early empirical, scientific and statistical examination of religion during the later half of the nineteenth century. Galton's pioneering statistical enquiries regarding the subjective effects of prayer on those doing the praying and the objective effects of prayer on those for whom prayers were offered generated considerable interest and debate (see Galton, 1869, 1872, 1883; Means, 1876). Compared with this early and promising start, several commentators writing a century later noted the lack of contemporary research building on this pioneering tradition (see Finney & Maloney, 1985; Hood, Morris, & Watson, 1987, 1989; Poloma & Pendleton, 1989; Janssen, de Hart, & den Draak, 1989). During the 1990s and the first decade of the twenty-first century, however, renewed interest has emerged in the empirical investigation of prayer in general and within the psychology of religion in particular, as illustrated, for example, by Brown's (1994) *The human side of prayer*, and by Francis and Astley's (2001) *Psychological perspectives on prayer: A reader*.

Current research within the psychology of prayer is beginning to develop the field in two significant ways. The first development concerns the definition and operationalisation of prayer in more nuanced and in more subtle ways than could be achieved by the relatively simple measurement of prayer frequency. The second development concerns the contextualisation of prayer research within frameworks proposed by coherent models of personality and individual differences. The intention of the present discussion is to illustrate these two significant developments and then to build on them in a novel manner.

Types of prayer

A good example of attempts to explore and to assess types of prayer is provided in the classic study reported by Poloma and Pendleton (1989). The annual Akron Area Study in 1985 included 15 questions tapping private prayer activities. That year the survey netted 560 completed interviews, representing a response rate of 89% of all households who started the very long series of questions. On the basis of these data, factor analysis, using oblimin and varimax rotation with principal components, extracted four factors, suggesting that prayer takes four distinct forms. The first form, styled “meditative prayer”, comprised five items ($\alpha = .81$): spending time just “feeling” or being in the presence of God; spending time just quietly thinking about God; spending time worshipping or adoring God; spending time reflecting on the bible; and asking God to speak and then listening for God’s answer. The second form, styled “ritualist prayer”, comprised two items ($\alpha = .59$): reading from a book of prayers; and reciting prayers that you have memorised. The third form, styled “petitionary prayer”, comprised two items ($\alpha = .78$): asking God for material things you may need; and asking for material things your friends or relatives may need. The fourth form, styled “colloquial prayer”, comprised six items ($\alpha = .85$): asking God to provide guidance in making decisions; thanking God for God’s blessings; asking God to forgive you your sins; talking with God in your own words; asking God to lessen world suffering; and spending time telling God how much you love God. In addition to proposing measures of these four forms of prayer, Poloma and Pendleton (1989) also proposed a five-item measure of “prayer experience” ($\alpha = .87$): feeling divinely inspired or led by God to perform some specific action as a result of prayer; receiving what you believed to be a deeper insight into a spiritual or biblical truth; receiving what you regarded as a definite answer to a specific request; feeling a strong presence of God during prayer; and experiencing a deep sense of peace and well-being during prayer.

In their foundation study, Poloma and Pendleton (1989) proceeded to examine the

relationship between five measures of quality of life (defined as life satisfaction, existential well-being, happiness, negative affect, and religious satisfaction) with their four forms of prayer, prayer experience, and frequency of prayer. On the basis of their analyses, they concluded that in the prediction of quality of life variables the frequency of prayer is less important than what one actually does during prayer (meditative, ritualist, petitionary or colloquial) and what happens when one prays (prayer experience).

Having prayer experiences is consistently related to the five measures of quality of life, failing to demonstrate significance only for negative affect. Meditative prayer by itself is related to two measures of quality of life: existential well-being and religious satisfaction, while petitionary prayer relates to none. Colloquial prayer, however, is the only prayer form that affects happiness and ritual prayer is the lone type of prayer affecting negative affect. (Poloma & Pendleton, 1989, p. 50).

This tradition of research has been developed further by Poloma and Pendleton (1991a, 1991b), Poloma (1993) and in a somewhat different way by Poloma and Gallup (1991).

A second and very different model of forms of prayer is provided by Ladd and Spilka (2002). They propose the theory that a general concept of prayer-as-connection suggests three main forms of prayer: inward prayer as connection with oneself; outward prayer as connection between people; and upward prayer as connection with the divine. In order to test this model, participants were asked to rate on a six-point scale the degree to which 153 items related to their own thinking while engaged in prayer. Drawing on the responses of 309 students to these 153 items, Ladd and Spilka somehow reduce their dataset to 29 items which under varimax or oblim rotation produced eight factors, two of which were described as inward, four as outward, and two as upward. The first inward form, styled "examination", comprised five items ($\alpha = .81$): examining myself; evaluating my inner life; devoting myself; committing; and judging myself. The second inward form, styled "tears", comprised three

items ($\alpha = .77$): misery; sadness; and grieving. The first upward scale, styled “sacramental”, comprised three items ($\alpha = .80$): engaging rituals; exploring sacraments; and connecting with tradition. The second upward scale, styled “rest”, comprised four items ($\alpha = .81$): quietude; silence; stillness; and private experiences. The first outward scale, styled “radical”, comprised four items ($\alpha = .73$): seeking to be revolutionary; boldness; radical approaching; and assertiveness. The second outward scale, styled “suffering” comprised three items ($\alpha = .76$): agonising with others; accepting the pain of others; and carrying the distress of people. The third outward scale, styled “intercession”, comprised three items ($\alpha = .72$): asking for help for other people; seeking assistance for others; and searching on behalf of someone else. The fourth outward scale, styled “petition”, comprised four items ($\alpha = .70$): asking for things I need; making personal appeals; asking that physical needs be met; and requesting material things. Ladd and Spilka’s (2002) second-order factor analysis, however, failed to confirm this conceptual grouping of the factors. On this account, factor one comprised two outward and one inward scale (intercession, examination, and suffering); factor two comprised one inward and two upward scales (tears, rest, and sacrament); and factor three comprised two outward scales (radical and petition). This tradition of research has been developed further by Ladd and Spilka (2006), and Ladd, Ladd, Harner, Swanson, Metz, St Pierre and Trnka (2007).

Personality and prayer

A good example of attempts to contextualise prayer within a coherent model of personality and individual differences is provided by a series of studies conducted since the mid-1990s drawing on Eysenck’s dimensional model of personality. According to this model, as discussed for example by Eysenck and Eysenck (1985), individual differences in personality can be most adequately and economically summarised in terms of three higher order orthogonal dimensions. This model also takes the view that neurotic and psychotic

disorders are not discontinuous from normal personality but occupy the extreme end of two different continua which describe individual differences in normal personality. Eysenck's three dimensional model of personality has been operationalised in a series of instruments designed for use among both adults and young people, including the Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), the Junior Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975), the Eysenck Personality Questionnaire Revised (Eysenck, Eysenck, & Barrett, 1985), and the Junior Eysenck Personality Questionnaire Revised (Corulla, 1990). These instruments also routinely include a lie scale alongside the three established measures of extraversion, neuroticism, and psychoticism.

In a pioneering paper, Francis (1996) argued that Eysenck's dimensional model of personality was quite fertile in generating theories for individual differences in the practice of prayer. First, Francis argues that a number of theories may suggest a positive correlation between neuroticism scores and personal prayer. If prayer is conceptualised as a coping mechanism to deal with worries and anxieties, it might be hypothesised that the neurotic individual would be more likely to engage in personal prayer. If prayer is conceptualised as a response to maintain God's favour and goodwill, it might be hypothesised that the neurotic individual would be more anxious to sustain this good relationship. If prayer is conceptualised as an intercessory device to bring before God personal needs, the needs of others, and the needs of the world, it might be hypothesised that the neurotic individual would be more aware of and concerned about such areas of need. This view is further supported by a body of research which describes a positive relationship between neuroticism and empathy (Eysenck & Allsopp, 1986; Eysenck, Pearson, Easting, & Allsopp, 1985; Corulla, 1987; Rushton, Fulker, Neale, Nias, & Eysenck, 1989).

Second, Francis argues that a number of theories may suggest a negative correlation between extraversion scores and personal prayer. If personal prayer is conceptualised as a

solitary and inward activity, it might be hypothesised that the introvert would be more in touch with this inward perspective on life. If personal prayer is conceptualised as conversation with God, it might be hypothesised that the introvert would be more likely to wish to talk things through with God as a compensation for fewer social contacts. If personal prayer demands a disciplined framework of space and time free from the intrusions of other people, social callers and telephone interruptions, it might be hypothesised that the introvert would be more likely to benefit from this kind of environmental context.

Third, Francis argues that a number of theories may suggest a negative correlation between psychoticism scores and personal prayer. If personal prayer is conceptualised as a response of unworthiness or guilt in the presence of the deity, it might be hypothesised that the toughminded individual would be less concerned with such feelings. If personal prayer is conceptualised as an empathic response to the needs of others, it might be hypothesised that the toughminded individual would be less aware of such needs. If personal prayer is conceptualised as the expression of an intimate relationship with God, it might be hypothesised that the toughminded individual would be less capable of forming and sustaining such a relationship. If personal prayer is conceptualised as acceptance of church teaching and ready socialisation into the norms of the church community, it might be hypothesised that tenderminded individuals would condition into these norms more readily. This view is further supported by a body of research which establishes a negative relationship between psychoticism scores and conditionability (Beyts, Frcka, Martin, & Levey, 1983; Eysenck & Wilson, 1978).

These theories have now been tested by fourteen studies among the broader general population of young people and adults leading to the consensus that personal prayer is independent of extraversion and neuroticism, but negatively associated with psychoticism. This consensus is supported by data from the United Kingdom reported by Francis and

Wilcox (1994) among 230 16- to 18-year-old female school pupils, by Francis and Wilcox (1996) among 236 16- to 19-year-old female A-level students, by Smith (1996) among 191 11- to 15-year-old school pupils, by Francis and Bolger (1997) among 50 retired members of an ex-civil servants association, by Francis (1997) among three samples of 378, 458, and 292 undergraduates, by Francis and Johnson (1999) among 311 primary school teachers, and by Fearn, Booker, and Francis (2001) among 157 adult artists. This consensus is also supported by data from the United States of America reported by Maltby among 92 female university students, by Lewis and Maltby (1996) among 100 male undergraduates, and by Maltby, Talley, Cooper, and Leslie (1995) among 324 adults, by data from France by Lewis (2000) among 462 female university students, by data from Australia by Kaldor, Francis, and Fisher (2002) among 1,033 adults, and by data from Norway by Lewis, Francis, and Enger (2004) among 479 school pupils. Another set of three studies among churchgoers, however, failed to find any significant relationship between personality and frequency of personal prayer (Francis, 1996; Francis & Astley, 1996; Francis & Daniel, 1997).

Psychological type and prayer

The Jungian model of psychological type proposes a very different theoretical framework of personality and individual differences from that proposed by Eysenck (see Jung, 1971). This framework is entirely concerned with normal personality and has been operationalised through a set of psychometric instruments, including the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), the Keirsey Temperament Sorter (Keirsey & Bates, 1978) and the Francis Psychological Type Scales (Francis, 2005). This model, too, has proved to be quite fertile in generating theories for individual differences in the practice of prayer, as illustrated by the titles of five well-established books: *Prayer temperament: Different prayer forms for different personality types* (Michael & Norrissey, 1984), *Who we*

are is how we pray: Matching personality and spirituality (Keating, 1987), *Pray your way: Your personality and God* (Duncan, 1993), *Personality and prayer: Finding and extending the prayer style that suits your personality* (Fowke, 1997), and *Prayer life: How your personality affects the way you pray* (Martínez, 2001). The theme has also been pursued in chapter titles of more general works on psychological type and religion, faith and spirituality, as illustrated by chapters on ‘personalities in prayer’ by Osborn and Osborn (1991) and on ‘prayer and bible study’ by Baab (1998). At its core psychological type theory suggests that individuals differ in terms of four bipolar preferences: two orientations, two perceiving preferences, two judging preferences, and two attitudes toward the outer world. Taken together these four bipolar preferences generate 16 discrete psychological types.

The two orientations are defined as introversion (I) and extraversion (E). Introverts draw their energy from the inner world of ideas, while extraverts draw their energy from the outer world of people and things. Extraverts are energised by people and drained by too much solitude, while introverts are energised by solitude and drained by too many people.

The two perceiving processes are defined as sensing (S) and intuition (N). Sensors perceive their environment through their senses and focus on the details of the here and now, while intuitives perceive their environment by making use of the imagination and inspiration. Sensors are distrustful of jumping to conclusions and of envisioning the future, while intuitives are overloaded by too many details and long to try out new approaches.

The two judging processes are defined as thinking (T) and feeling (F). Thinkers reach their judgements by relying on objective logic, while feelers reach their judgements by relying on subjective appreciation of the personal and interpersonal factors involved. Thinkers strive for truth, fairness, and justice, while feelers strive for harmony, peace, and reconciliation.

The two attitudes toward the outer world are defined as judging (J) and perceiving (P). Judgers use their preferred judging process (either thinking or feeling) to deal with the outside

world. Their outside world is organised, scheduled, and planned. Perceivers use their preferred perceiving process (either sensing or intuition) to deal with the outside world. Their outside world is flexible, spontaneous, and unplanned.

Different commentators have interpreted the implications of psychological type theory for prayer in different ways. For example, in their pioneering application, Michael and Norrisey (1984) chose to operate in terms of temperaments, that is comparing the preferences of the following four combinations of the components of psychological type: SJ, NF, SP and NT. According to their model the SJ preference is styled the Ignatian Temperament, with an emphasis on structured traditional prayer. They argue that SJs prefer to project themselves back into the biblical narrative or historical setting, connecting the past events to contemporary life. The NF preference is styled the Augustinian Temperament, with an emphasis on constant striving for future growth. They argue that NFs prefer to transpose the biblical narrative to the here and now with little concern for the historical setting. The SP preference is styled the Franciscan Temperament, with an emphasis on going wherever the Spirit calls. They argue that SPs see the presence of God in the whole of creation and prefer to pray through acts of service. The NT preference is styled the Thomistic Temperament, with an emphasis on logical, orderly progression of thought. They argue that NTs are future oriented and prefer to pray through acts of study and striving after truth and goodness.

A somewhat different approach was taken by Baab (1998) who chose to operate in terms of the four functions, distinguishing between the introverted and extraverted modes: ES, IS, EN, IN, ET, IT, EF, and IF. According to her model, extraverted sensing prayer (ES) is rooted in sensory experience of the world. Introverted sensing prayer (IS) is a quiet reflective response to God. Extraverted intuitive prayer (EN) involves the application of vision, inspiration, and ingenuity for the purpose of furthering God's kingdom in the world. Introverted intuitive prayer (IN) involves meditating in God's presence and allowing the mind

to flit from one thought to the next. Extraverted thinking prayer (ET) is a process of analysis and decision-making based on logic, with application in the outer world. Introverted thinking prayer (IT) is concerned with the meaning of truth and justice and with the response of the human race to the divine challenge of righteousness. Extraverted feeling prayer (EF) is concerned with connecting with other people in support, encouragement, compassion, warmth, loyalty, and faithfulness. Introverted feeling prayer (IF) is grounded in deeply held values, expressed in reflective prayer waiting for God to speak and in passionate prayer for the needs of the world.

In spite of the potential richness in psychological type theory for predicting individual differences in prayer preferences, little attempt has been made to explore such predictions in published studies of empirical research, apart from the pioneering study reported by Ware, Knapp, and Schwarzin (1989). In this study 170 self-defined Christians (66 men and 104 women) completed the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), together with the Knapp-Ware Prayer Form Questionnaire, a four-part instrument designed to explore four hypotheses derived from the Michael and Norrisey (1984) analysis of the relationship between prayer and temperament outlined above. The findings provided only very partial support for the hypothesised relationships between temperament and prayer preferences. The first hypothesis that SJs would demonstrate a higher preference for structured traditional prayers than other temperament types was supported. The second hypothesis that community prayer would be preferred more by extraverts was not supported. The third hypothesis that each of the four temperaments would prefer prayer forms that corresponded to their own temperament was not supported. Three of the four types of liturgy (SJ, NF, and SP) were in fact rated highest by SJs, while NTs rated all but the NT liturgy (contemplation) the lowest. The fourth hypothesis that each of the four temperaments would prefer meditation forms that corresponded to their own temperament was not supported. No clear correspondence

appeared between the kind of meditation and temperament or type.

The aim of the present study is to build on the research reported by Ware, Knapp and Schwarzin (1989) by modifying their theory in three ways. First, in place of temperament, it is proposed to assess prayer preferences in terms of the eight discrete concepts proposed by psychological type theory: extraversion, introversion, sensing, intuition, thinking, feeling, perceiving, and judging. Second, it is proposed to operationalise these eight prayer preferences as an original way of describing individual differences in prayer and as an alternative framework to the kind of frameworks previously proposed, for example, by Poloma and Pendleton (1989) and by Ladd and Spilka (2002) as described above. Third, it is hypothesised that, although prayer preferences may be properly and helpfully understood in terms of the powerful description of individual differences proposed by psychological type theory, such preferences are much more than a simple projection of an individual's basic psychological type. For example, while an introverted prayer style may well appeal to introverts because of a basic symmetry between their form of prayer and their introverted orientation, an introverted prayer form may appeal equally to extraverts, but for very different reasons, possibly as a way of nurturing their less preferred orientation or possibly as a way of affirming a particular tradition into which they have been nurtured. These alternative theoretical positions, contrasted with those advanced by Ware, Knapp and Schwarzin (1989), are consistent with the position taken by a parallel field of research concerned with the connection between psychological type and preferred ministry styles (Francis & Payne, 2002).

Method

Sample

Over a six year period (1997-2002) a questionnaire was mailed to all individuals

ordained as deacons within the Anglican Church in England, Ireland, Scotland, and Wales, generally about a year after their ordination. From the questionnaires distributed a total of 1,518 completed questionnaires were returned, making a response rate of 49.9%. The present analyses were conducted on the 1,476 respondents who provided a full set of data across the variables examined (858 men and 618 women). Of the total sample, 11.8% were under the age of thirty, 26.2% were in their thirties, 28.4% were in their forties, 26.4% were in their fifties, and 7.3% were aged sixty or over. The majority were married (75.3%), 18.8% were single, 3.9% were divorced, and 2.0% were widowed. Over half (57.0%) had been ordained to serve in stipendiary ministry, and 43% had been ordained to serve in non-stipendiary ministry.

Measures

Psychological type was assessed by the Keirsey Temperament Sorter (Keirsey & Bates, 1978). This instrument proposes 70 forced choice questions to distinguish between the two orientations (E or I), the two perceiving functions (S or N), the two judging functions (T or F), and the two attitudes toward the outside world (J or P). Introversion and extraversion are distinguished by 10 questions like: At parties do you stay late with increasing energy (E), or leave early with decreased energy (I). Sensing and intuition are distinguished by 20 questions like: Are you more realistic than speculative (S), or more speculative than realistic (N). Thinking and feeling are distinguished by 20 questions like: Are you more inclined to be fair-minded (T), or sympathetic (F). Judging and perceiving are distinguished by 20 questions like: Are you more punctual (J), or leisurely (P). A number of studies support the reliability and validity of this instrument, including Waskel and Coleman (1991) and Fearn, Francis, and Wilcox (2001).

Prayer preferences were assessed by a battery of 80 items, with ten designed to access

each of the eight constructs core to psychological type theory. These items were derived from a careful review of the literature and were critiqued, debated and developed by four expert authorities concerned with psychological type. Each item was assessed on a five-point Likert scale: agree strongly, agree, not certain, disagree, and disagree strongly.

Data analysis

The data were analysed by means of the SPSS statistical package, using the reliability, correlational, breakdown, t-test, and factor routines (SPSS Inc, 1988).

Results

The first step in data analysis examined the scale properties of the eight scales proposed by the KTS and reported the following alpha coefficients: extraversion and introversion, .71; sensing and intuition, .82; thinking and feeling, .86; judging and perceiving, .84.

The psychological type literature has developed a highly distinctive method for displaying type data in the format of type tables. The present data are presented in this way in

- insert table 1 about here -

table 1 in order to facilitate clear comparison with other studies in the field. According to these data, the present sample of clergy show clear preference for extraversion (61.1%) over introversion (38.9%), for intuition (70.1%) over sensing (29.9%), for feeling (70.5%) over thinking (29.5%), and for judging (77.0%) over perceiving (23.0%). In terms of Jungian dominant types, feelers (33.9%) and intuitives (34.1%) are much more strongly represented among this group of Anglican clergy than thinkers (15.1%) and sensors (13.9%). The clear preferences for intuition, for feeling, and for judging are consistent with the profile of 626 male and 247 female Anglican clergy in England generated by the Myers-Briggs Type

Indicator and reported in Francis, Craig, Whinney, Tilley, and Slater (2007). On the other hand, such a clear preference for extraversion was not found in this earlier study.

In drawing up ten items to access prayer preferences in terms of each of the eight Jungian functions, it was anticipated that some items would be found to work better than others. Factor analysis and item rest-of-test correlation analyses were employed to select the best seven items from each set of ten. These resulting seven-item scales are presented in tables 2, 3, 4, and 5, together with the item rest-of-scale correlations and percentage

- insert tables 2, 3, 4, and 5 about here -

endorsements. The item rest-of-test scale correlations (r) express the relationship between each individual item and the sum total of the other six items. In order to simplify the presentation of data, the two responses 'agree strongly' and 'agree' have been collapsed into the category 'yes', the two responses 'disagree' and 'disagree strongly' have been collapsed into the category 'no', and the response 'not certain' has been expressed as '?'

The alpha coefficients demonstrate that five of these eight seven-item prayer preference scales functioned satisfactorily: extraversion, .80; introversion, .79; judging, .78; perceiving, .73; and feeling, .69. The other three scales, however, fell below DeVellis' (1991) threshold of .65: intuition, .60; sensing, .56; and thinking, .55. Further research is needed to refine these scales through the generation of new items.

Table 6 presents the Pearson correlation coefficients between the eight preference

- insert table 6 about here -

scales and four scales of the Keirsey Temperament Sorter treated as continuous variables with the high scoring poles defined as introversion, sensing, feeling, and judging. While the pattern of relationship between prayer preferences and psychological type scores is far from simple, one clear conclusion emerges from this set of correlations, namely that each of the eight prayer preference scales relates in the expected direction with the psychological type

scores. Thus, high scores on the psychological type scale of introversion are associated with a higher preference for introverted prayer (+ .19) and with a lower preference for extraverted prayer (- .27). High scores on the psychological type scale of sensing are associated with a higher preference for sensing prayer (+ .09) and with a lower preference for intuitive prayer (- .36). High scores on the psychological type scales of feeling are associated with a higher preference for feeling prayer (+ .35) and with a lower preference for thinking prayer (- .33). High scores on the psychological type scales of judging are associated with a higher preference for judging prayer (+ .30) and with a lower preference for perceiving prayer (- .29). Given the way in which the Keirsey Temperament Sorter scores are calculated the scales of extraversion, intuition, thinking and perceiving simply function as the mirror image of the scales with which they are paired.

Discussion and conclusion

By drawing on psychological type theory, as originally proposed by Jung (1971) and developed and operationalised by a series of psychometric tests including the Myers-Briggs Type Indicator (Myers & McCaulley, 1985), the Keirsey Temperament Sorter (Keirsey & Bates, 1978), and the Francis Psychological Type Scales (Francis, 2005), this present study has attempted to advance the empirical assessment and psychological understanding of prayer in two ways.

The first advance concerns offering a new model by means of which different forms of prayer, different approaches to prayer, or different prayer preferences can be defined and operationalised. This model stands in the same tradition as the models proposed by Poloma and Pendleton (1989) and by Ladd and Spilka (2002), but offers a rationale for classification rooted in a wider and coherent theory of individual differences. Drawing on data provided by 1,476 newly ordained Anglican clergy in England, Ireland, Scotland, and Wales, the study has

proposed eight seven-item prayer preference scales.

In terms of the two orientations, introverted prayer is characterised by preference for praying alone, being energised by praying in silence, being refreshed after long silences in prayer, listening to God in the silence, preferring personal meditative prayer, needing to be away from people to pray, and valuing stillness. Extraverted prayer is characterised by preference for praying with others, being energised by praying in groups of people, preferring words rather than silence, preferring open shared prayers to personal meditative prayer, finding it easy to pray with strangers, naturally becoming engaged in prayer groups, and being energised by prayer groups.

In terms of the two perceiving processes, sensing prayer is characterised by focusing on aspects of my life, remaining focused on one aspect of God, drawing on traditional prayers, looking at religious pictures, listening to a hymn or religious song, being aware of my posture, and being aware of smell. Intuitive prayer is characterised by losing myself in the divine, using my imagination, dwelling on the mystery of God, deepening insight into the complexity of life, expanding my visionary horizons, opening up to new ideas and possibilities, and embracing ideas as if out of nowhere.

In terms of the two judging processes, thinking prayer is characterised by logical and well thought-out ideas, theological reflection, analysing my faith in God, seeking theological coherence, using my mind, praying for fairness, and resisting emotion. Feeling prayer is characterised by experiencing empathy for those for whom I pray, feeling embraced by God, sharing God's anguish for human pain, drawing on my heart, sharing compassion and emotion, being driven by real concern for human suffering and pain, experiencing an intimate relationship with God.

In terms of the two attitudes, judging prayer is characterised by a preference for setting aside a specific time for prayer, praying at the same time each day, planning prayer

time well, following a set pattern of praying, seeing prayer as part of an ordered way of life, being reluctant to change prayer patterns, and being reluctant to change prayer times.

Perceiving prayer is characterised by enjoying free and open-ended prayer, fitting in a time to pray whenever space arises, praying whatever comes into my mind at the time, feeling constrained by set prayer times, dislike for planning fixed times for prayer, keeping prayer time flexible and spontaneous, and rescheduling prayer time if something else comes up.

The second advance concerns locating individual differences in prayer preferences within a coherent model of personality. This development stands in the same tradition as earlier studies which deployed the Eysenckian dimensional model of personality discussed in the introduction to the present paper, but extends that work to embrace the Jungian model of psychological type. Building on Ware, Knapp, and Schwarzin's (1989) pioneering study, the present data have demonstrated that, although the relationship between prayer preferences and psychological type is complex, nonetheless knowledge about psychological type helps to predict prayer preferences in the expected direction. An introverted form of prayer is preferred more by introverts than by extraverts, while an extraverted form of prayer is preferred more by extraverts than by introverts. A sensing form of prayer is preferred more by sensors than by intuitives, while an intuitive form of prayer is preferred more by intuitives than by sensors. A feeling form of prayer is preferred more by feelers than by thinkers, while a thinking form of prayer is preferred more by thinkers than by feelers. A judging form of prayer is preferred more by judges than by perceivers, while a perceiving form of prayer is preferred more by perceivers than by judges.

There remains, however, considerable room for improving the eight prayer preference scales proposed by the present study, especially the three scales concerned with intuitive prayer, sensing prayer, and thinking prayer, which all fell below the recommended alpha level for a reliable scale as proposed by DeVellis (1991). This problem proposes an important

agenda for future research. Moreover, while the present study has confirmed the value of psychological type theory for interpreting and explaining individual differences in prayer preferences among newly-ordained clergy, the study requires extension and replication among lay people since two conflicting theories may suggest that the findings among clergy (especially those newly ordained) could be distorted by their professional training. One theory maintains that professional ordination training may train clergy in particular forms of prayer and hence suppress the expression of their deeper prayer preferences. On this account, the power of psychological type theory to predict prayer preferences would be stronger among lay people. A contrasting theory maintains that professional ordination training may train clergy to discover and to cultivate their personal deep-seated prayer preferences. On this account, the power of psychological type theory to predict prayer preferences would be weaker among lay people. This problem also proposes an important agenda for future research.

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Table 1. Type Distribution for KTS
N = 1,476 + = 1% of *N*

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ <i>n</i> = 104 (7.0%) +++++ ++	ISFJ <i>n</i> = 81 (5.5%) +++++ +	INFJ <i>n</i> = 206 (14.0%) +++++ ++++ +	INTJ <i>n</i> = 81 (5.5%) S <i>n</i> = 442 (29.9%)	E	<i>n</i> = 902	(61.1%)
				I	<i>n</i> = 574	(38.9%)
				N	<i>n</i> = 1034	(70.1%)
				T	<i>n</i> = 435	(29.5%)
				F	<i>n</i> = 1041	(70.5%)
				J	<i>n</i> = 1137	(77.0%)
				P	<i>n</i> = 339	(23.0%)
ISTP <i>n</i> = 1 (0.1%)	ISFP <i>n</i> = 5 (0.3%)	INFP <i>n</i> = 79 (5.4%) +++++ +	INTP <i>n</i> = 17 (1.2%)	Pairs and Temperaments		
				IJ	<i>n</i> = 472	(32.0%)
				IP	<i>n</i> = 102	(6.9%)
				EP	<i>n</i> = 237	(16.1%)
				EJ	<i>n</i> = 665	(45.1%)
				ST	<i>n</i> = 205	(13.9%)
				SF	<i>n</i> = 237	(16.1%)
				NF	<i>n</i> = 804	(54.5%)
				NT	<i>n</i> = 230	(15.6%)
ESTP <i>n</i> = 5 (0.3%)	ESFP <i>n</i> = 15 (1.0%) +	ENFP <i>n</i> = 195 (13.2%) +++++ ++++ +++	ENTP <i>n</i> = 22 (1.5%)	SJ	<i>n</i> = 416	(28.2%)
				SP	<i>n</i> = 26	(1.8%)
				NP	<i>n</i> = 313	(21.2%)
				NJ	<i>n</i> = 721	(48.8%)
				TJ	<i>n</i> = 390	(26.4%)
				TP	<i>n</i> = 45	(3.0%)
				FP	<i>n</i> = 294	(19.9%)
				FJ	<i>n</i> = 747	(50.6%)
ESTJ <i>n</i> = 95 (6.4%) +++++ +	ESFJ <i>n</i> = 136 (9.2%) +++++ ++++	ENFJ <i>n</i> = 324 (22.0%) +++++ ++++ ++++ ++	ENTJ <i>n</i> = 110 (7.5%) EN <i>n</i> = 651 (44.1%)	IN	<i>n</i> = 383	(25.9%)
				IS	<i>n</i> = 191	(12.9%)
				ES	<i>n</i> = 251	(17.0%)
				ET	<i>n</i> = 232	(15.7%)
				EF	<i>n</i> = 670	(45.4%)
				IF	<i>n</i> = 371	(25.1%)
				IT	<i>n</i> = 203	(13.8%)

Jungian Types (E)		Jungian Types (I)		Dominant Types				
<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>Leslie J Francis and Mandy Robbins</i>		
E-TJ	205	13.9	I-TP	18	1.2	Dt. T	223	15.1
E-FJ	460	31.2	I-FP	84	5.7	Dt. F	544	33.9
ES-P	20	1.4	IS-J	185	12.5	Dt. S	205	13.9
EN-P	217	14.7	IN-J	287	19.4	Dt. N	504	34.1

Psychological type and prayer preferences: A study among Anglican clergy in the United Kingdom

Table 2: Orientation prayer preferences: item rest-of-test correlations and percentage endorsement

	r	Yes %	? %	No %
<i>Extraversion</i>				
I am energised when I pray in a group of people	0.65	57	25	18
I prefer to pray with others	0.49	28	38	34
I prefer to use words rather than silence in prayer	0.28	31	29	40
I naturally become engaged in prayer groups	0.62	33	27	40
Belonging to a prayer group energises me	0.65	43	30	28
I prefer open shared prayer to personal meditative prayer	0.63	13	32	55
I find it easy to pray with strangers	0.44	40	25	35
<i>Introversion</i>				
I prefer to pray alone	0.44	48	26	26
I am energised by praying in silence	0.62	76	13	12
I am refreshed after long silences in prayer	0.60	65	19	16
I need to be away from people when I pray	0.34	33	29	39
I prefer personal meditative prayer to open shared prayer	0.61	53	28	19
Stillness is an important part of prayer for me	0.57	86	9	5
Listening to God in the silence is an important part of my prayer life	0.52	84	10	6

Table 3: Perceiving prayer preferences: item rest-of-test correlations and percentage endorsement

	r	Yes %	? %	No %
<i>Sensing</i>				
Prayer helps me to focus on aspects of my life	0.13	89	9	3
When I pray I tend to remain focused on one aspect of God	0.17	14	34	52
I find traditional prayers helpful	0.24	65	18	17
I find looking at a religious picture helps me to pray	0.47	46	19	35
I find listening to a hymn or a religious song helps me to pray	0.22	65	18	17
My prayer life is enhanced by the sense of smell	0.45	28	27	46
My prayer life is enhanced by an awareness of my posture	0.29	33	26	41
<i>Intuition</i>				
I think of prayer as losing myself in the divine	0.37	54	26	20
My prayer life is enhanced by using my imagination	0.34	69	19	12
When I pray I often dwell on the mystery of God	0.37	58	24	17
Prayer deepens my insight into the complexity of life	0.38	78	18	4
Prayer expands my visionary horizons	0.44	74	21	5
For me prayer opens up new ideas and possibilities	0.52	78	19	3
In prayer ideas come to me as if out of nowhere	0.36	76	16	8

Table 4: Judging prayer preferences: item rest-of-test correlations and percentage endorsement

	r	Yes %	? %	No %
<i>Thinking</i>				
My prayers are often logical and well thought out	0.27	20	26	54
I often use prayer as a time to analyse my faith in God	0.21	39	20	41
I only pray for what is theologically coherent	0.37	14	19	68
My prayer life is shaped by my mind	0.39	48	32	20
It is more important to pray for fairness than compassion	0.20	6	38	55
Emotion gets in the way of prayer	0.22	10	24	67
Prayer needs to be shaped by theological reflection	0.32	53	24	23
<i>Feeling</i>				
I really feel empathy for those for whom I pray	0.40	79	16	5
In prayer I often feel embraced by God	0.42	69	20	11
In prayer I share God's anguish for human pain	0.46	66	26	9
I experience prayer as an intimate relationship between me and God	0.41	89	7	2
My prayer life is shaped by my heart	0.33	66	25	9
My prayers are often full of compassion and emotion	0.43	46	34	20
My prayers are driven by real concern for human suffering and pain	0.39	74	21	5

Table 5: Attitude prayer preferences: item rest-of-test correlations and percentage endorsement

	r	Yes %	? %	No %
<i>Judging</i>				
I prefer to pray at the same time each day	0.63	65	11	24
I prefer to set aside a specific time for prayer	0.61	70	12	17
I find it helpful to plan my prayer time well	0.40	23	28	48
I am annoyed if I have to reschedule my prayer time	0.42	19	18	64
There are patterns in my prayer life which I am reluctant to change	0.48	40	22	39
For me prayer is part of an ordered way of life	0.47	74	14	12
I often follow a set pattern of praying	0.49	64	13	23
<i>Perceiving</i>				
I often pray what comes into my mind at the time	0.28	89	7	4
I prefer to fit a time to pray in whenever I have space	0.49	34	19	47
I enjoy free open ended prayer	0.29	57	20	22
I often feel constrained by a set prayer time	0.51	24	17	59
I don't like planning fixed times for prayer	0.57	23	23	54
I am happy to reschedule my prayer time if something else comes up	0.30	70	16	14
I prefer my prayer time to be flexible and spontaneous	0.63	41	30	29

Table 6: Correlations between prayer preferences and psychological type

prayer preference scales	Keirsey Temperament Sorter Scale			
	E/I	N/S	T/F	P/J
introverted prayer	0.19***	-0.14***	0.08**	-0.00
extraverted prayer	-0.27***	0.04	0.03	-0.01
sensing prayer	0.01	0.09***	0.11***	0.00
intuitive prayer	-0.07**	-0.36***	0.21***	-0.24***
thinking prayer	0.04	0.13***	-0.33***	0.17***
feeling prayer	-0.13***	0.12***	0.35***	-0.12***
judging prayer	0.12***	0.16***	-0.16***	0.30***
perceiving prayer	-0.16***	-0.13***	0.17***	-0.29***

Note In the above analyses the KTS have been scored in the direction of I, S, F, and J.

* = $p < .05$; ** = $p < .01$; *** = $p < .001$