Understanding cathedral visitors: Psychological type and individual differences in experience and appreciation

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Abstract

This study examines the experience and appreciation of 381 visitors to St Davids Cathedral in West Wales through the lens of Jungian psychological type theory. The data demonstrate that St Davids Cathedral attracts more introverts than extraverts, more sensers than intuitives, and more judgers than perceivers, but equal proportions of thinkers and feelers. The data also demonstrate that different aspects of the visitor experience appeals to different psychological types. Sensors are more attracted than intuitives by the facts, information and data which they encounter on their visit. Feelers are more attracted than thinkers by the atmosphere and wider ambience generated by the cathedral during their visit. The implications of these findings are discussed for understanding and developing the way in which cathedrals may develop the visitor experience.
Understanding cathedral visitors: Psychological type and individual differences in experience and appreciation

There seems to be a growing recognition within England and Wales of the symbiotic relationship between cathedrals and the tourism industry. For example, in their report, *Heritage and Renewal*, the Archbishops’ Commission on Cathedrals (1994) highlighted both the importance of tourism for cathedrals and the importance of cathedrals for tourism within the wider economy. The commissioners wrote as follows.

Tourism is of great significance to cathedrals – in terms of their mission of teaching, evangelism and welcome, and as an important source of income. Cathedrals also play a major part in the nation’s tourism (p. 135).

In spite of this growing recognition of the role of cathedrals in tourism (Royal Institute for British Architects, 2001; Shackley, 2002; English Heritage, 2004), there has been relatively little empirical research into the expectations and experiences of visitors to the many cathedrals in England and Wales, apart from the studies reported by English Tourist Board (1979), Gasson and Winter (1994), Jackson and Hudman (1995), Voase (2002) and Williams, Francis, Robbins, and Annis (in press). Better understanding of those who visit cathedrals and of their reasons for visiting could be of potential benefit both to those who manage the tourism industry within cathedrals and to those who hold the wider brief for linking tourism attractions within local areas and wider regions.

One recognised and helpful way to understand the profile of tourists is through the “individual differences” approach, drawing on recognised demographic characteristics. The tourism market can be segmented in terms of such visible factors as age and sex and in terms of socio-economic status and ethnicity. Two relatively recent attempts to understand cathedral visitors have penetrated to a somewhat deeper level by identifying psychologically-
grounded individual differences in visitor motivation. In the first of these studies, working not on the basis of empirical research but deeply grounded in his experience as Sub-dean of Lincoln Cathedral, Davis (1992) observed that cathedral visitors were far from being a homogenous group. In his analysis he developed a four-fold typology distinguishing between those whom he described as “Gawpers”, “Cultured despisers”, “Prayer-makers”, and “True believers”. The gawpers are those who come to the cathedral as visitors rather than as worshippers and yet experience from their visit some kind of transcendent power. Left to explore the cathedral in their own way, gawpers may well experience the wonder generated by the environment. Although gawpers may not recognise or have a religious experience, nonetheless they may well experience moments of recollection about God. The Cultured despisers are those who do not find it difficult to enter the cathedral, but who feel unsettled when the issues of religion or God are raised. They may find themselves feeling annoyed when religion is pushed upon them. The cultured despisers are more opposed to religion than they are to God. The Prayer-makers are those who make use of prayer cards or boards to ask others to pray on their behalf. The topics are often wide ranging and varied, from the heart-felt prayers for sick and dying loved-ones to more materialistic and self-centred concerns. The True believers are those who have a clear perception of their Christian beliefs and are often unwilling to have those beliefs challenged. These are people who firmly believe that ambiguity over belief should not be tolerated.

In the second of these studies, Williams, Francis, Robbins, and Annis (in press), using a self-completion questionnaire among 514 visitors to one cathedral, made an empirical distinction between two groups of cathedral visitors whom they characterised as Pilgrims and as Secular tourists. The Pilgrims were defined as people who normally attend church services most Sundays (and who consequently may be currently shaped within the Christian tradition). The Secular tourists were defined as people who never attend church on a Sunday.
Understanding cathedral visitors

(and who consequently may be less currently shaped within the Christian tradition). The data generated by this study demonstrated the extent to which the experiences and responses of these two groups differed when visiting the same cathedral. The authors concluded that this particular cathedral appeared to be much better equipped to welcome and to affirm pilgrims than it was to cater for secular tourists.

**Psychological type theory**

Against this background, the branch of psychology specifically concerned with personality and individual differences has the potential to offer further insight into understanding cathedral visitors. There may be particular potential within psychological type theory as proposed initially by Carl Jung (1971). Psychological type theory (together with the family of instruments designed to operationalise this theory) proposes four key ways in which individuals differ. Two of these differences concern the central role of the perceiving processes (sensing or intuition) and the judging processes (thinking or feeling) in processing and evaluating information. These two aspects of psychological type may have significant implications for the different ways in which individuals experience and respond to visiting cathedrals. The other two differences concern the ways in which individuals express their lives in the outer world, distinguishing between the orientations (extraversion or introversion) and the attitudes (judging or perceiving). These two aspects of psychological type may have significant implications for influencing who choose to visit cathedrals in the first place.

The first contrast is defined by the notion of orientation. The two orientations are concerned with where energy is drawn from and focused. On the one hand, extraverts (E) are orientated toward the outer world; they are energised by the events and people around them. They enjoy communicating and thrive in stimulating and exciting environments. They tend to focus their attention on what is happening outside themselves. They are usually open
people, easy to get to know, and enjoy having many friends. Introverts (I), on the other hand, are orientated toward their inner world; they are energised by their inner ideas and concepts. They enjoy solitude, silence, and contemplation, as they tend to focus their attention on what is happening in their inner life. They may prefer to have a small circle of intimate friends rather than many acquaintances.

The cathedrals of England and Wales tend to be large, peaceful and reflective places, dimly illuminated by light filtered through stained glass windows and guarded by relatively small entrances. They tend to project an atmosphere of solitary quiet introspection (which is consistent with the Jungian notion of introversion) rather than engaged social interaction (which would be consistent with the Jungian notion of extraversion). Overall, therefore, cathedrals appear to be structured to appeal to introverted rather than extraverted visitors. This theory generates a first hypothesis, that more introverts than extraverts will visit cathedrals.

The second contrast is defined by the notion of perceiving. The two perceiving functions are concerned with the way in which people gather information. On the one hand, sensing types (S) focus on the realities of a situation as perceived by the senses. They tend to focus on specific details, rather than on the overall picture. They are concerned with the actual, the real, and the practical; they tend to be down to earth and matter of fact. On the other hand, intuitive types (N) focus on the possibilities of a situation, perceiving meanings and relationships. They may feel that perception by the senses is not as valuable as information gained from the unconscious mind as indirect associations and concepts impact on their perception. They focus on the overall picture, rather than on specific facts and data. The cathedrals of England and Wales tend to be concerned with providing information for visitors in the form of information leaflets, guidebooks and notices. They tend to provide shops with displays of religious books and religious artefacts. They tend to develop websites
designed to prepare visitors by providing information about the history, the architecture and current activities. This organisation of facts and information is likely to be more appreciated by individuals with a preference for sensing (according to the Jungian definition of this construct) than by those with a preference for intuition (who according to the Jungian definition of this construct are much less concerned with facts and details). This theory generates a second hypothesis, that sensers will value the facts and information provided by cathedrals more highly than intuitives will value such things.

The third contrast is defined by the notion of judging. The two judging functions are concerned with the criteria which people employ to make decisions and judgements. On the one hand, thinking types (T) make decisions and judgements based on objective, impersonal logic. They value integrity and justice. They are known for their truthfulness and for their desire for fairness. They consider conforming to principles to be of more importance than cultivating harmony. For thinkers impersonal objectivity is more important than interpersonal relationships. For them the mind is more important than the heart. On the other hand, feeling types (F) make decisions and judgements based on subjective, personal values. They value compassion and mercy. They are known for their tactfulness and for their desire for peace. They are more concerned to promote harmony, than to adhere to abstract principles. For feelers interpersonal relationships are more important than impersonal objectivity. For them the heart is more important than the mind.

The cathedrals of England and Wales tend to generate a distinctive and potentially powerful atmosphere which may speak to the hearts and souls of visitors about the deep and fundamental relationship between the creator and the created order, and about the deep and fundamental relationship between the self and others (which is consistent with the Jungian notion of feeling). The quietness of a side chapel, the shaft of light reflected on the medieval pier, the intricate carving on a bench-end, and the text carved into the memorial stone may all
touch the spirit, lift the heart, whisper into the ear of visitors rumours of transcendence, or
inspire intimation of the harmony and peace at the centre of all being. Here is the experience
which may trigger the profound sense of peace, the awe-inspiring echo of divinity, or the
recognition of the presence of God. Here is the experience which may restore fractured
hearts and reconnect individuals with their inner roots, which may restore fractured
relationships and reconnect individuals with others, and which may restore fractured souls
and reconnect individuals with their God. The cool, detached, analytical (and sometimes
sceptical) approach of the thinker (according to the Jungian definition of this construct) may
be less open to such experiences than the warm, involved, and engaged approach of the
feeler. This theory generates a third hypothesis that thinkers will value the atmosphere and
wider ambience generated by the cathedral less highly than feelers will value such things.

The fourth contrast is defined by the notion of attitude toward the outer world. The
two attitudes toward the outer world are determined by which of the two sets of functions is
preferred in dealings with the outer world. The choice is between the perceiving function
(sensing or intuition) and the judging function (thinking or feeling). On the one hand,
judging types (J) seek to order, rationalise, and structure their outer world, as they actively
judge external stimuli. They enjoy routine and established patterns. They prefer to follow
schedules in order to reach an established goal and may make use of lists, timetables, or
diaries. They tend to be punctual, organised, and tidy. They prefer to make decisions quickly
and to stick to their conclusions once made. On the other hand, perceiving types (P) do not
seek to impose order on the outer world, but are more reflective, perceptive, and open, as they
passively perceive external stimuli. They have a flexible, open-ended approach to life. They
enjoy change and spontaneity. They prefer to leave projects open in order to adapt and
improve them. Their behaviour may often seem impulsive and unplanned.

The cathedrals of England and Wales tend to be seen as part of the structure of
organised civic life. The messages conveyed by the ordered architecture, by the manicured
grounds, and by the notice boards are those of discipline and convention (qualities
fundamental to the Jungian notion of judging). The welcome inside given by stewards or by
guardians of the tollbooths convey the impression of a somewhat rigid and conformist
environment (qualities quite opposed to the Jungian notion of perceiving). Overall, therefore,
cathedrals tend to be presented to appeal to a judging rather than a perceiving disposition.
This theory generates a fourth hypothesis, that more judgers than perceivers will visit
cathedrals.

Jungian psychological type theory is based on the model of paired opposites.
According to the theory, individuals express preferences for either introversion (I) or
extraversion (E), for either sensing (S) or intuition (N), for either thinking (T) or feeling (F),
for either judging (J) or perceiving (P). Taken together this set of four binary options
generates 16 discrete psychological types, each of which is expressed conventionally by the
four initial letters of the preferences. For example, the senior author of the present paper
prefers introversion (I) over extraversion, intuition (N) over sensing, thinking (T) over
feeling, and judging (J) over perceiving. His type is, therefore, signalled by the formula
INTJ.

Subsequent to Jung’s pioneering work, several psychometric instruments have been
developed to operationalise and to measure psychological type, the best known of which
currently include the Keirsey Temperament Sorter (KTS: Keirsey & Bates, 1978), the Myers-
Briggs Type Indicator (MBTI: Myers & McCaulley, 1985) and the Francis Psychological
Type Scales (FPTS: Francis, 2005). These three instruments all function according to the
same basic principle of inviting respondents to select one option within the context of forced-
choice multiple response questions. The selected options are then employed to assign
respondents to one or other of the four binary types. Although there is not perfect symmetry
between different operationalisations of psychological type theory there is a growing body of evidence to support the concurrent validity of these instruments (Quinn, Lewis, & Fischer, 1992; Tucker & Gillespie, 1993; Kelly & Jugovic, 2001; Francis, Robbins, & Craig, 2007). The present study has chosen to employ the Francis Psychological Type Scales because this instrument has been designed specifically for inclusion in research projects, while the Myers-Briggs Type Indicator and the Keirsey Temperament Sorter were designed for clinical or professional use or within the individual self-assessment context.

In recent years, in one significant strand of research, psychological type theory has emerged as a fruitful source for generating hypotheses designed to test and to account for individual differences in religiosity, including studies on clergy and church leaders from different denominational backgrounds (Francis, Payne, & Jones, 2001; Francis & Robbins, 2002; Francis & Payne, 2002; Francis, Craig, Horsfall, & Ross, 2005), church congregations (Francis & Jones, 1997, 1998; Francis, 2002; Craig, Francis, Bailey, & Robbins, 2003; Francis, Duncan, Craig, & Luffman, 2004; Village & Francis, 2005; Craig, 2005; Village, 2005), and general samples embracing both religious and non-religious people (Fearn, Francis, & Wilcox, 2001; Francis, Jones, & Craig, 2004; Ross, Francis, & Craig, 2005). A different strand of research has also begun to demonstrate the potential value of psychological type theory for illuminating individual differences in responses among tourists (Gountas & Gountas, 2000). As yet, however, psychological type theory has not been applied to examining and understanding visitor responses to sacred sites, to churches and to cathedrals.

Against this background, the aim of the present study is to administer the Francis Psychological Type Scales to a random sample of cathedral visitors, together with scales concerned with assessing the ways in which they respond to specific aspects of their visit. These data will be analysed to test the four hypotheses advanced regarding the relevance of
psychological type theory for understanding cathedral visitors.

**Method**

**Sample**

A sample of 381 visitors to St Davids Cathedral accepted an invitation to complete a psychological type profile alongside other questions about themselves and about their visit to the cathedral. Of the total sample, 43% were male and 57% were female; 24% were under the age of thirty, 24% were in their thirties or forties, 41% were in their fifties or sixties, and the remaining 11% were aged seventy or over; just 3% lived in St Davids, 32% lived elsewhere in Wales, 58% were visiting from England, and the remaining 8% were visiting from a wide variety of places outside England and Wales; 76% described themselves as Christian, 18% as having no religious affiliation, 2% as belonging to another major world faith, and the remaining 4% declined to answer this question; 35% were weekly churchgoers, 16% never attended church, and the remaining 49% attended church less often than weekly.

**Measures**

Psychological type was assessed by the Francis Psychological Type Scales (Francis, 2005). This instrument proposes four 10-item scales designed to distinguish preferences between introversion and extraversion, sensing and intuition, feeling and thinking, and judging and perceiving. Each item offers a forced choice between a pair of contrasting descriptors.

Visitor experience and appreciation was assessed by 45 Likert-type items assessed on a 5-point scale: agree strongly, agree, not certain, disagree and disagree strongly. The pool of items was designed to sample a wide range of issues and specifically to include one set of items concerned with the visitors’ responses to facts and information and a second set of
items concerned with the visitors’ responses to feelings and atmosphere.

**Results**

The four scales of the Francis Psychological Type Sorter also achieved satisfactory internal reliabilities in terms of the alpha coefficients of internal reliability (Cronbach, 1951) extraversion and introversion, 0.80; sensing and intuition, 0.68; thinking and feeling, 0.70; judging and perceiving, 0.76. All four scales achieve alpha coefficients above DeVellis’ (1991) recommended threshold of 0.65. Table 1 presents the type profile of visitors to St Davids Cathedral.

<table>
<thead>
<tr>
<th>Jungian Type</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>ISTJ</td>
<td>23%</td>
</tr>
<tr>
<td>ISFJ</td>
<td>15%</td>
</tr>
<tr>
<td>ESTJ</td>
<td>13%</td>
</tr>
<tr>
<td>ESFJ</td>
<td>12%</td>
</tr>
</tbody>
</table>

Preferences for thinking (51%) and for feeling (49%) were closely balanced. Considering these indicators together, 4 of the 16 Jungian types accounted for almost two-thirds of the visitors (63%): ISTJ (23%), ISFJ (15%), ESTJ (13%) and ESFJ (12%).

Exploratory factor analyses and correlational analyses identified 8 items suitable for a Scale of Facts and Information (SFI) and 8 items suitable for a Scale of Feeling and Atmosphere (SFA). These two sets of items are displayed in table 2, together with the item rest-of-scale correlations and the alpha coefficient of internal reliability (Cronbach, 1951).

Both scales achieved alpha coefficients in excess of the threshold of 0.70 proposed by Kline (1993) as well as the threshold of 0.65 proposed by DeVellis (1991).
Table 3 displays the relationship between psychological type preferences and scores recorded on the Scale of Facts and Information and on the Scale of Feeling and Atmosphere. These data confirm that sensers show more appreciation than intuitives for the facts and information dimension of their visit to St Davids Cathedral, and that feelers show more appreciation than thinkers for the feeling and atmosphere dimension of their visit to St Davids Cathedral. These data also demonstrate that judgers show more appreciation than perceivers for the facts and information dimension of their visit to St Davids Cathedral.

**Conclusion**

The data generated by the present study carry practical implications both for those who manage the tourism industry within cathedrals and for those who hold the wider brief linking tourism attractions within local areas and wider regions. Consideration will be given first to the specific issues of relevance to cathedrals.

There are two distinct strands within Jungian psychological type theory. The first strand concerns the central role of the perceiving processes (sensing or intuition) and the judging processes (thinking or feeling) in processing and evaluating information. The present study hypothesised that there would be significant differences in the way in which specific aspects of the cathedral were perceived by sensers and by intuitives and that there would be significant differences in the way in which specific aspects of the cathedral were evaluated by feelers and by thinkers. Both hypotheses have been supported by the data.

Regarding the difference between sensing and intuition, the Scale of Facts and Information demonstrated how sensers valued the information produced, displayed and made available by cathedrals more highly than intuitives valued this aspect of their visit. This provides a salutary reminder that some visitors are more interested than others in factual
information about the cathedral that they are visiting. In order to enhance the experience of sensing visitors, cathedrals need to provide clear and accessible facts about the history, about the architecture and about the people associated with the place. On the other hand, in order to enhance the experience of intuitive visitors, cathedrals need to develop a different genre of material designed to spark the imagination and to stimulate unanswered (and unanswerable) questions.

Regarding the difference between thinking and feeling, the Scale of Feeling and Atmosphere demonstrated how feelers valued the atmosphere and wider ambience of the cathedral more highly than thinkers valued this aspect of their visit. This provides a salutary reminder that some visitors are more open than others to the stimulating and transforming atmosphere of the cathedral that they are visiting. In order to enhance the experience of feeling visitors, cathedrals need to provide opportunities for warming the heart, for touching the soul and for stimulating relational engagement with the inner self, with others and with God. On the other hand, in order to enhance the experience of thinking visitors, cathedrals need to provide opportunities for stimulating the mind to engage with the profound questions of life, with issues of truth, justice and ultimate concern.

The second strand within Jungian psychological type theory concerns the contextual role of the orientations (introversion or extraversion) and the attitudes toward the outer world (judging or perceiving) in shaping whether or not individuals were likely to become cathedral visitors. The present study hypothesised that there would be more introverts than extraverts visiting the cathedral and that there would be more judgers than perceivers visiting the cathedral. Both hypotheses have been supported by the data, and in a way which demonstrates the extent to which the psychological type profile of cathedral visitors differs from the normative profile of the United Kingdom population as a whole described by Kendall (1998). While the present survey found that 57% of cathedral visitors preferred
introversion, according to Kendall 48% of the United Kingdom population preferred introversion. While the present survey found that just 19% of cathedral visitors preferred perceiving, according to Kendall 42% of the United Kingdom population preferred perceiving.

Regarding the differences between introversion and extraversion, it is easy to understand how introverts are more attracted than extraverts to the relatively quiet and essentially solitary activity of walking round and absorbing the cathedral site. Cathedrals may wish to explore ways of engaging more proactively with extraverts who will approach visiting the cathedral with somewhat different expectations from those carried by introverts. Extraverts may welcome engaging stewards, chaplains and other visitors in conversation, made possible by the appropriately designed coffee shop. Extraverts may welcome engaging with interactive presentations and with experience-based ways of communication.

Regarding the difference between judging and perceiving, it is easy to understand how judgers are more attracted than perceivers to the relatively structured and organised presentation of the cathedral site. Cathedrals may wish to explore ways of engaging more proactively with perceivers who will approach the cathedral with somewhat different expectations from those carried by judgers. Perceivers may welcome less formal ways through which to engage with the cathedral, perhaps through displays and activities in the cathedral grounds, through attractive and stimulating ideas and possibilities about the cathedral displayed in the shopping precinct, and through opportunities to drop into and out of the cathedral without the formal requirement to pay an entry fee at each point of access.

Overall the present study has served to introduce psychological type theory as a lens through which to view the diversity of individual difference among cathedral visitors. The theory has generated fruitful hypotheses which have received empirical support from a random sample of 381 visitors to St Davids Cathedral, and suggested some practical lines of
development for cathedrals’ ministry among visitors. Here are the foundations of a research approach which deserves further attention by those responsible for managing the relationship between cathedrals and visitors.

Given this level of information about cathedral visitors, it may become possible for those concerned with linking tourist attractions within local areas and wider regions to understand better how cathedrals integrate within the larger vision of the tourism industry. For this potential to be realised, however, further studies employing Jungian psychological type theory need to be conducted within other key tourist attractions. The present study, together with the earlier work reported by Gountas and Gountas (2000), provide the appropriate foundations on which to build.
References


Francis, L. J., Craig, C. L., Horsfall, T., & Ross, C. F. J. (2005). Psychological types of male and female evangelical lay church leaders in England, compared with United Kingdom
population norms. *Fieldwork in Religion, 1*, 69-83.


Royal Institute for British Architects (2001). *To be a pilgrim: Meeting the needs of visitors to cathedrals and churches in the United Kingdom*. London: International Council on Museums and Sites UK.


Table 1: Type Distribution for Cathedral visitors

<table>
<thead>
<tr>
<th>Type</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>EJT</td>
<td>88</td>
<td>23.1%</td>
</tr>
<tr>
<td>ISTP</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>ESTP</td>
<td>5</td>
<td>1.3%</td>
</tr>
<tr>
<td>ESTJ</td>
<td>50</td>
<td>13.1%</td>
</tr>
</tbody>
</table>

Dichotomous Preferences

| E | n = 163 | 42.8% |
| I | n = 218 | 57.2% |
| S | n = 273 | 71.7% |
| N | n = 108 | 28.5% |
| T | n = 194 | 50.9% |
| F | n = 187 | 49.1% |
| J | n = 309 | 81.1% |
| P | n = 72  | 18.9% |

Pairs and Temperaments

| E | n = 189 | 49.6% |
| I | n = 29  | 7.6%  |
| S | n = 43  | 11.3% |
| N | n = 102 | 31.5% |

Understanding cathedral visitors: psychological type and individual differences in experience and appreciation

Table 2: Scales of visitor experience and appreciation: item rest of scale correlations
Scale of facts and information (SFI)
The information leaflets were informative 0.3811
The information leaflets were easy to understand 0.3530
The range of products available in the shop was good 0.2945
The product prices were reasonable in the shop 0.3470
I have accessed the cathedral website 0.4395
The information on the cathedral website was helpful 0.5944
The information on the cathedral website was clear and informative 0.6280
The cathedral website was easy to use 0.5826
alpha 0.7467

Scale of feeling and atmosphere (SFA)
I found the cathedral inviting 0.4581
I found the cathedral uplifting 0.6791
I found the cathedral awe-inspiring 0.5812
I found the cathedral spiritually alive 0.6329
I felt a sense of peace from my visit 0.6521
I felt a sense of God’s presence from my visit 0.7062
I felt a sense of the spiritual from my visit 0.7611
My visit was an emotional experience 0.6088
alpha 0.8739
Table 3: Scales of visitor experience and appreciation by psychological type

<table>
<thead>
<tr>
<th>type preference</th>
<th>mean</th>
<th>sd</th>
<th>mean</th>
<th>sd</th>
<th>t</th>
<th>P&lt;</th>
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<tr>
<td><strong>Scale of facts and information (SFI)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>introversion and extraversion</td>
<td>26.4</td>
<td>4.4</td>
<td>26.1</td>
<td>3.8</td>
<td>0.7</td>
<td>NS</td>
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<tr>
<td>sensing and intuition</td>
<td>26.7</td>
<td>3.9</td>
<td>25.1</td>
<td>4.3</td>
<td>3.5</td>
<td>.001</td>
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<tr>
<td>thinking and feeling</td>
<td>25.9</td>
<td>3.8</td>
<td>26.6</td>
<td>4.4</td>
<td>1.7</td>
<td>NS</td>
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<tr>
<td>judging and perceiving</td>
<td>26.5</td>
<td>4.0</td>
<td>25.1</td>
<td>4.1</td>
<td>2.6</td>
<td>.01</td>
</tr>
<tr>
<td><strong>Scale of feeling and atmosphere (SFA)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>introversion and extraversion</td>
<td>30.6</td>
<td>5.7</td>
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<td>5.5</td>
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<td>4.9</td>
<td>0.8</td>
<td>NS</td>
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