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Identifying learning preferences among Italian undergraduate students studying the sociology
of religion: Drawing on psychological type preferences

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Abstract

This study argues that the notion of *learning preferences* (rooted within a coherent and established theory of personality and individual differences) may be more fruitful than the largely contested notion of *learning styles*. The case is illustrated by extrapolation from psychological type theory in the light of the profile of 581 students enrolled in undergraduate programmes embracing the sociology of religion at Padua University, Italy, employing the Italian translation of the Francis Psychological Type Scales. Overall the data demonstrated a relatively balanced need for teaching and learning approaches appropriate for introverts and extraverts, for sensing types and intuitive types, and for feeling types and thinking types. At the same time, the group was heavily weighted in terms of judging types over perceiving types, indicating a priority toward structured and disciplined presentation of the curriculum.

Keywords: psychological type, learning styles, sociology of religion, individual differences, Italy

Introduction

Within the broader literature concerned with individual differences in teaching and learning, several distinctive models of learning styles were proposed during the 1970s and 1980s, together with instruments developed to assess preferences within these models. For example, the Student Learning Styles Scale developed by Grasha and Riechmann (1975) distinguishes between six aspects of the learners' preferred styles for interacting with teacher and fellow students in a learning environment, defined as participant, avoidant, collaborative, competitive, independent, and dependent. This instrument received critique and application during the 1970s and 1980s (Andrews, 1981; Ferrell, 1983; Grasha, 1984; Riechmann & Grasha, 1974, Sapp, Elliott, & Bounds, 1983). The Gregorc Learning Style Delineator (Gregorc, 1979, 1984) distinguishes between four learning styles defined as concrete sequential, concrete random, abstract sequential, and abstract random. This instrument also received critique and application during the 1980s (Davenport, 1986; Joniak & Isaksen, 1988; Kreuze & Payne, 1989; Lundstrom & Martin, 1986; O'Brien, 1990; Van Voorhees, Wolf, Gruppen, & Stross, 1988; Walton, 1988;). The Learning Style Inventory, developed to measure Kolb's (1984) model of learning styles, distinguishes between divergent learners, assimilative learners, convergent learners, and accommodative learners. This instrument also attracted considerable application and critique from the late 1970s onwards (Certo & Lamb, 1980; Freedman & Stumpf, 1981; Highhouse & Doverspike, 1987; Sales & Carrier, 1987; Atkinson, 1988; Veres, Sims, & Locklear, 1991). The Index of Learning Styles developed by Felder and Silverman (1988) operationalises four dimensions or processes, each conceptualised in terms of two opposing preferences, and defined as perception, input, processing and understanding. Felder and Silverman's model was designed originally to be particularly relevant to the effective teaching of chemical engineering students and had been subsequently applied to the areas of college science education (Felder, 1993), to foreign and

second language education (Felder & Henriques, 1995), and to A-level religious studies students (Francis & Fearn, 2001)

From the 1990s the notion of learning styles has been subjected to a number of both constructive and critical reviews (Thompson & Crutchlow, 1993; Coffield, Moseley, Hall, & Ecclestone, 2004; Pashler, McDaniel, Rohrer, & Bjork, 2008; Romanelli, Bird, & Ryan, 2009; Li, 2011) and has emerged as a contested construct for three main reasons (Pashler, McDaniel, Rohrer, & Bjork, 2009; Scott, 2010; Rohrer & Pashler, 2012; Rogowsky, Calhoan, & Tallal, 2015; Kirschner, 2017; An & Carr, 2017): the very number and variety of aspects of learning styles proposed by different scholars suggest a somewhat random and disorganised field; the lack of predictive power associating learning styles with learning outcomes suggests a field that lacks practical application; and the absence of overarching integrating theory suggests the need for deeper intellectual engagement. Recognising the contested nature of the construct of learning styles, the present paper proposes the notion of learning preferences. This notion of learning preferences is rooted within a coherent and established theory of personality and individual differences that is able to draw on a much deeper and richer theoretical framework than is generally available for the learning styles literature. More specifically the present study is concerned with applying and assessing within the context of undergraduate programmes involving the sociology of religion one specific model of personality that has implications for learning preferences and for motivational engagement with learning, the model of psychological type introduced originally by Jung (1971).

Psychological type theory is distinguished from other frequently employed models of personality in two important ways. Other core models of personality, like the Sixteen Personality Factor model proposed by Cattell, Eber, and Tatsuoka (1970), the Three Dimensional model proposed by Eysenck and Eysenck (1975) and the Big Five Factor model proposed by Costa and McCrae (1985), all conceptualise individual differences in terms of

continua and include within their models the assessment of the precursors of abnormality or psychopathy. These features are made very obvious, for example, by two of the three Eysenckian dimensions that are characterised by the terms ‘neuroticism’ and ‘psychoticism’. Eysenck’s neuroticism scale moves from emotional stability (low scores), through emotional lability, to neurotic disorder (high scores). Eysenck’s psychoticism scale moves from tendermindedness (low scores), through toughmindedness, to psychotic disorders (high scores). In contrast, psychological type theory operates in terms of typology rather than continua, and is clear to focus wholly on issues concerned with differences in normal and healthy personality.

While psychological type theory has its roots in the pioneering conceptualisation of Jung (1971), it has been significantly developed and extended in association with a series of psychological assessment tools, including the Keirsey Temperament Sorter (Keirsey & Bates, 1978), the Myers-Briggs Type Indicator (Myers & McCaulley, 1985) and the Francis Psychological Type Scales (Francis, 2005). Within the broader field of the psychology of personality and individual differences psychological type theory remains a highly contested construct, with questions raised against both the theoretical framework and the instruments designed to operationalise that framework, as evidenced for example by McCrae and Costa (1989), Pittenger (2005), and Stein and Swan (2019). Critical overviews both of psychological type theory and of psychological type measures are provided by Bayne (1995, 2005). Recent sustained work by Lloyd (2007, 2008, 2012, 2015), grounded within the philosophy of science, has argued for the scientific credibility of psychological type theory. Recent sustained work by Francis’ research group has demonstrated that various measures of psychological type theory possess appropriate psychometric properties of reliability and validity, as demonstrated for example by Francis and Jones (1999), Francis, Robbins, and Craig (2007), and Francis, Laycock, and Brewster (2017). Other studies have mapped the

relationship between measures of psychological type and other recognised measures of personality, as demonstrated for example by Francis and Jones (2000) and Francis, Craig, and Robbins (2007, 2008).

Introducing psychological type theory

At its core, psychological type theory distinguishes between two orientations (introversion and extraversion), two perceiving functions (sensing and intuition), two judging functions (thinking and feeling), and two attitudes toward the external world (judging and perceiving).

Introversion (I) and extraversion (E) 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 the 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 (S) and intuition (N) describe the two functions 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 (T) and feeling (F) describe the two functions associated with the judging process. They describe different preferences by which decisions are reached and by which data are evaluated. Individuals who prefer thinking make decisions based on objective, logical analysis. Individuals who prefer feeling make decisions based on subjective values and on how people will be affected.

Judging (J) and perceiving (P) describe the two attitudes toward the outer world. Individuals who relate to the outer world with their preferred judging function (thinking *or* feeling) 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 relate to the outer world with their preferred perceiving function (sensing *or* intuition) present a flexible and spontaneous approach to life. They prefer to keep plans and organisation to a minimum and display a preference for openness.

These core components of psychological type theory are routinely employed in a number of different ways among which four are of particular theoretical and practical significance. First, the dichotomous preferences provide a firm foundation, distinguishing as they do between the two orientations, the two perceiving functions, the two judging functions, and the two attitudes. Second, the combination of the four preferences generates sixteen complete types facilitating a textured profile taking into account the concurrent preferences for orientation, for perceiving, for judging, and for attitude toward the outer world. Third, the theory of type dynamics identifies the developmental trajectory of the four functions, ordering within individuals the sequential priorities given to their dominant function, auxiliary function, tertiary function and inferior function. Dominant sensing characterises the practical person, dominant intuition the imaginative person, dominant feeling the humane person, and dominant thinking the logical person. Fourth temperament theory, as documented by Keirsey and Bates (1978), distinguishes between four temperament types: sensing and judging (SJ) defining the Epimethean temperament, sensing and perceiving (SP) defining the Dionysian temperament, intuition and feeling (NF) defining the Apollonian temperament, and intuition and thinking (NT) defining the Promethean temperament.

The relevance of psychological type theory for teaching and learning in sociology within higher education resides in the ways in which psychological type preferences may influence learning styles and motivational engagement with learning (see, for example, Jensen, 1987; Lawrence, 1993; Chesborough, 2009). For example, introverts may learn best on their own, but struggle in the seminar in which they may be put on the spot to speak before they are ready to do so. Extraverts may learn best when in the seminar group, but struggle to be motivated to fulfil the individual reading beforehand. Sensing types may be best motivated when they are introduced to the detailed data and evidence, but struggle when they are confronted by abstract theories before encountering the data. Intuitive types may be best motivated when they are introduced to imaginative theories, but struggle when they are confronted by detailed data that they cannot locate within a meaningful theoretical framework. Thinking types may be best motivated when they are presented with a clear objective analysis of the issues, but show less interest in the human stories illustrating those issues. Feeling types may be best motivated by the personal and interpersonal narrative, but show less interest in the objective analysis of the issues illustrated by such narrative. Judging types may be best motivated by a clear and structured programme of learning, but feel unsettled when new and unexpected trajectories are opened up. Perceiving types may be most motivated by a flexible and developing learning environment, but feel unsettled when routine is too tightly imposed and followed.

Research question

Against this background the present study set out to map the psychological type profile of second year students participating in the undergraduate programme involving the sociology of religion at Padua University, Italy. In view of the recognised sex differences in psychological type profiles (see Kendall, 1998), profiles for male students and for female students will be reported and considered separately.

Method

Procedure

The participants in the second year undergraduate sociology programme at Padua University, Italy (academic years 2014-2015, 2015-2016, and 2016-2017) were invited to complete a recognised measure of psychological type. Participation was voluntary. Participants were guaranteed anonymity and confidentiality, and offered feedback on the group profile. The research was conducted within the ethical guidelines of the University of Padua.

Measure

Psychological type was assessed by the Francis Psychological Type Scales (FPTS: Francis, 2005). This is a 40-item instrument comprising four sets of 10 forced-choice items related to each of the four components of psychological type: orientation (extraversion or introversion), perceiving process (sensing or intuition), judging process (thinking or feeling), and attitude toward the outer world (judging or perceiving). Recent studies have demonstrated that this instrument functions well. For example, Francis, Craig, and Hall (2008) reported alpha coefficients of .83 for the EI Scale, .76 for the SN Scale, .73 for the TF Scale, and .79 for the JP Scale. Participants were asked for each pair of characteristics to check the 'box next to that characteristic which is closer to the real you, even if you feel both characteristics apply to you. Tick the characteristics that reflect the real you, even if other people see you differently'.

Participants

Completed psychological type profiles were returned by 581 students. Among the 153 male students 36% were under the age of 20, 30% were 20 years of age, 11% were 21 years of age, 10% were 22 years of age, 6% were 23 years of age, and 7% were over the age of 23. Among the 428 female students 38% were under the age of 20, 31% were 20 years of age,

16% were 21 years of age, 6% were 22 years of age, 3% were 23 years of age, 4% were over the age of 23, and 2% did not reveal their age.

Analysis

The research literature concerning the empirical investigation of psychological type has developed a highly distinctive method for analyzing, handling, and displaying statistical data in the form of 'type tables'. This convention has been adopted in the following presentation in order to integrate these new data within the established literature and to provide all the detail necessary for secondary analysis and further interpretation within the rich theoretical framework afforded by psychological type. Type tables have been designed to provide information about the sixteen discrete psychological types, about the four dichotomous preferences, about the six sets of pairs and temperaments, about the dominant types, and about the introverted and extraverted Jungian types. Commentary on this table will, however, be restricted to those aspects of the data strictly relevant to the research question.

Results

- insert tables 1 and 2 about here -

Table 1 presents the psychological type profile for the 153 male students. Four key aspects of these data are of particular relevance. First, in terms of dichotomous type preferences the data demonstrate preferences for judging (79%) over perceiving (21%), for thinking (63%) over feeling (37%), and for introversion (58%) over extraversion (42%), with a closer balance between preferences for intuition (52%) and sensing (48%). Second, in terms of dominant type preferences, the largest group of male students reported dominant thinking (30%), followed by dominant intuition (29%), dominant sensing (24%) and dominant feeling (17%). Third, in terms of the sixteen complete types, the three types with the highest concentration of male students are INTJ (16%), ESTJ (16%), and ISTJ (14%). Fourth, in

terms of temperament theory, the largest group of male students reported SJ (43%), followed by NT (32%), NF (20%) and SP (5%).

Table 2 presents the psychological type profile of the 428 female students. Again, four key aspects of these data are of particular importance. First, in terms of dichotomous preferences the data demonstrate preferences for judging (83%) over perceiving (17%), for sensing (58%) over intuition (42%), for introversion (57%) over extraversion (43%), and for thinking (55%) over feeling (45%). Second, in terms of dominant type preferences, the largest group of female students reported dominant sensing (33%), followed by dominant intuition (29%), dominant thinking (21%) and dominant feeling (18%). Third, in terms of the sixteen complete types, the three types with the highest concentration of female students are ISTJ (17%), INFJ (13%) and ESTJ (13%). Fourth in terms of temperament theory, the largest group of female students reported SJ (50%), followed by NF (21%), NT (21%) and SP (8%).

Discussion and conclusion

This study set out to explore the psychological type profile of second year students participating in the undergraduate programme involving the sociology of religion at Padua University, Italy with a view to discussing the potential implications of such profiling for teaching and learning strategies. Looking at the dichotomous type preferences, the data indicate that on three of the four components of the typology the student body is quite well balanced.

In terms of the two orientations, there are more introverts than extraverts among both the women and the men. Nevertheless, a good balance of introverted and extraverted teaching and learning styles should work well across the student body. In this context, encouraging both teachers and learners to be more aware of and to appreciate more the legitimate differences between the approaches of introverted and extraverted learners can be reflected in seminars and group discussion activities. As extraverts become more aware of the need for

introverts to reflect inwardly before they speak outwardly, extraverts become more respectful in pausing and allowing introverts the pace that they need to enter into the conversation. As introverts become more aware of the need for extraverts to process and to articulate their thoughts outwardly before they internalise those thoughts, introverts become more respectful in allowing extraverts the public space that they need before reaching their conclusion.

In terms of the two perceiving functions, there are slightly more intuitive types than sensing types among the men and slightly more sensing types than intuitive types among the women. A good balance of intuitive and sensing teaching and learning styles should work well across the student body. In this context, encouraging both teachers and learners to be more aware of and to appreciate more the legitimate differences between the approaches of sensing and intuitive learners can be reflected in presenting material in diverse ways. Sensing types really appreciate being presented first with the facts and information from which they can patiently construct the bigger picture of ideas and theories. Beginning with the big picture just frustrates and confuses the sensing learner. On the other hand, intuitive types really appreciate being presented first with the big picture and the grand theories into which they can piece the evidence as it emerges. Beginning with the facts and details just frustrates the intuitive learner. As sensing types and intuitive types become more aware of their own learning preferences, so they also learn to become more accepting of the different approaches by their opposite type.

In terms of the two judging functions, there is a slight weighting in favour of thinking among the women and a more pronounced weighting among the men. Yet given the smaller number of men within the group, a good balance of feeling and thinking teaching and learning styles should work well across the student body. In this context, encouraging both teachers and learners to be more aware of and to appreciate more the legitimate differences between the approaches of feeling and thinking learners can be reflected in respecting the

different bases on which the two types evaluate materials and situations and reach their judgements. In classroom debate the evaluative judgements of feeling types and of thinking types may lead to profound misunderstanding and unnecessary antagonism between those taking different positions on the same issue. Thinking types are motivated by detached impersonal objective analysis. They can be perceived as too cold, harsh and uncaring by feeling types. Feeling types are motivated by involved interpersonal relational analysis. They can be perceived as too distracted by the unrealistic quest for peace and harmony by thinking types. As feeling types and thinking types become more aware of their own learning preferences, so they also learn to become more accepting of the different perspectives adopted by their opposite type.

Where there is a strong imbalance, however, is in respect of the two attitudes, with 79% of the male students and 83% of the female students preferring a judging approach. This suggests that there will be little enthusiasm for perceiving teaching and learning styles across the student body. In this context, it may become especially important for both teachers and learners to be more aware of and to appreciate more the distinctive and legitimate characteristics of perceiving type learners. As the minority within the programme, perceiving type learners may be significantly disadvantaged. Because perceiving types learners are relating to the outer world with a perceiving function (either sensing or intuition), in contrast with the majority of their peers who are relating to the outer world with a judging function (either feeling or thinking), they may appear to the majority as people who just do not fit in with the dominant ethos. While the majority want closure, the perceiving types want to keep the options open. While the majority want to get topics settled and closed, the perceiving types want to go after more and more data (sensing) or more and more theories (intuition). While the majority want to make ample time for preparing and revising their work for assessment (say essay assignments), perceiving types cannot get properly motivated until the

last minute and some of them may turn in excellent and original thinking right on the deadline for the submission. As judging types (the majority culture) become more aware of the learning preferences of perceiving types (the minority culture), so they also learn to become more accepting of the different approaches that enrich the learning community.

A second insight to emerge from this study concerns the main dominant psychological profile of students currently undertaking the undergraduate programme. Among the male and female students considered together there is a clear hierarchy among the dominant preferences. The largest group of students report dominant sensing (30%). These are practical people who are characterised by their rootedness in the present context and a desire to make a practical difference. Second in line are those who report dominant intuition (29%). These are imaginative people who are characterised by an attraction to big ideas and to scoping possibilities for the future. Third in line are those who report dominant thinking (23%). These are logical people who are characterised by their search for truth and justice. Fourth in line are those who report dominant feeling (18%). These are humane people who are characterised by their concern for people and who wish to stand alongside others. The curriculum in sociology of religion is likely to resource these different dominant types in different ways: dominant intuitive types may be attracted to major sociological theories, dominant sensing types may be attracted to how sociology can make a practical difference to the working of the world, dominant feeling types may be attracted to the contribution of sociology to human wellbeing and to people's lives, and dominant thinking types may be attracted to assessing the coherence, the strengths and the weaknesses of competing sociological theories. Awareness of these diverse interests may help to shape the curriculum, the pedagogies employed, and the way in which assessment is arranged.

A third insight comes from considering the sixteen complete types. When male and female students are considered together a complete type strongly represented within the

student body is INTJ, accounting for 80 of the 581 participants (14%). The profile of this type provided by Myers (1998, p. 7) reads as follows:

Have original minds and great drive for their own ideas and purposes. Have long-range vision and quickly find meaningful patterns in external events. In fields that appeal to them, they have fine power to organise a job and carry it through. Sceptical, critical, independent, determined, have high standards of competence and performance.

Here are the independent thinking types whose preferences for introversion (I) may render them invisible in a large class until their dominant introverted intuition (N), filtered through their auxiliary extraverted thinking (T), startles by its perceptive originality capable of organising, summarising and synthesising discussions and challenging half-hidden assumptions.

A major limitation with the present study is that it was confined to undergraduate students studying the sociology of religion within one university. The issues raised by the study are, nonetheless, sufficiently intriguing to justify replication among other samples of students in order to develop a richer account of the implications of psychological type theory for learning preferences and for motivational engagement among students studying different disciplining perspectives on religion.

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Table 1

Psychological type distribution for male students

The Sixteen Complete Types				Dichotomous Preferences		
ISTJ <i>n</i> = 22 (14.4%) +++++	ISFJ <i>n</i> = 8 (5.2%) +++++	INFJ <i>n</i> = 14 (9.2%) +++++	INTJ <i>n</i> = 25 (16.3%) +++++	E <i>n</i> = 64 (41.8%)	I <i>n</i> = 89 (58.2%)	
+++++	+++++	+++++	+++++	S <i>n</i> = 73 (47.7%)	N <i>n</i> = 80 (52.3%)	
+++++		++++	+++++	T <i>n</i> = 97 (63.4%)	F <i>n</i> = 56 (36.6%)	
++++			+	J <i>n</i> = 121 (79.1%)	P <i>n</i> = 32 (20.9%)	
ISTP <i>n</i> = 1 (0.7%) +	ISFP <i>n</i> = 0 (0.0%)	INFP <i>n</i> = 9 (5.9%) +++++	INTP <i>n</i> = 10 (6.5%) +++++	Pairs and Temperaments		
		+	++	IJ <i>n</i> = 69 (45.1%)	IP <i>n</i> = 20 (13.1%)	EP <i>n</i> = 12 (7.8%)
				EJ <i>n</i> = 52 (34.0%)		
				ST <i>n</i> = 48 (31.4%)	SF <i>n</i> = 25 (16.3%)	NF <i>n</i> = 31 (20.3%)
				NT <i>n</i> = 49 (32.0%)		
ESTP <i>n</i> = 0 (0.0%)	ESFP <i>n</i> = 6 (3.9%) ++++	ENFP <i>n</i> = 2 (1.3%) +	ENTP <i>n</i> = 4 (2.6%) +++	SJ <i>n</i> = 66 (43.1%)	SP <i>n</i> = 7 (4.6%)	NP <i>n</i> = 25 (16.3%)
				NJ <i>n</i> = 55 (35.9%)		
				TJ <i>n</i> = 82 (53.6%)	TP <i>n</i> = 15 (9.8%)	FP <i>n</i> = 17 (11.1%)
				FJ <i>n</i> = 39 (25.5%)		
ESTJ <i>n</i> = 25 (16.3%) +++++	ESFJ <i>n</i> = 11 (7.2%) +++++	ENFJ <i>n</i> = 6 (3.9%) ++++	ENTJ <i>n</i> = 10 (6.5%) +++++	IN <i>n</i> = 58 (37.9%)	EN <i>n</i> = 22 (14.4%)	IS <i>n</i> = 31 (20.3%)
+++++	++		++	ES <i>n</i> = 42 (27.5%)		
+++++				ET <i>n</i> = 39 (25.5%)	EF <i>n</i> = 25 (16.3%)	IF <i>n</i> = 31 (20.3%)
+				IT <i>n</i> = 58 (37.9%)		

Jungian Types (E)			Jungian Types (I)			Dominant Types		
	<i>n</i>	%		<i>n</i>	%		<i>n</i>	%
E-TJ	35	22.9	I-TP	11	7.2	Dt.T	46	30.1
E-FJ	17	11.1	I-FP	9	5.9	Dt.F	26	17.0
ES-P	6	3.9	IS-J	30	19.6	Dt.S	36	23.5
EN-P	6	3.9	IN-J	39	25.5	Dt.N	45	29.4

Note: N = 153 (NB: + = 1% of N)

Table 2

Psychological type distribution for female students

The Sixteen Complete Types				Dichotomous Preferences				
ISTJ <i>n</i> = 73 (17.1%) +++++ +++++ +++++ ++	ISFJ <i>n</i> = 46 (10.7%) +++++ +++++ +++++ +	INFJ <i>n</i> = 45 (10.5%) +++++ +++++ +++++ +	INTJ <i>n</i> = 55 (12.9%) +++++ +++++ +++++ +++	E <i>n</i> = 183 (42.8%) I <i>n</i> = 245 (57.2%)				
ISTP <i>n</i> = 7 (1.6%) ++	ISFP <i>n</i> = 6 (1.4%) +	INFP <i>n</i> = 8 (1.9%) ++	INTP <i>n</i> = 5 (1.2%) +	S <i>n</i> = 248 (57.9%) N <i>n</i> = 180 (42.1%)				
ESTP <i>n</i> = 10 (2.3%) ++	ESFP <i>n</i> = 10 (2.3%) ++	ENFP <i>n</i> = 14 (3.3%) +++	ENTP <i>n</i> = 11 (2.6%) +++	T <i>n</i> = 237 (55.4%) F <i>n</i> = 191 (44.6%)				
ESTJ <i>n</i> = 57 (13.3%) +++++ +++++ +++	ESFJ <i>n</i> = 39 (9.1%) +++++ ++++	ENFJ <i>n</i> = 23 (5.4%) +++++	ENTJ <i>n</i> = 19 (4.4%) ++++	J <i>n</i> = 357 (83.4%) P <i>n</i> = 71 (16.6%)				
				Pairs and Temperaments				
				IJ <i>n</i> = 219 (51.2%) IP <i>n</i> = 26 (6.1%) EP <i>n</i> = 45 (10.5%) EJ <i>n</i> = 138 (32.2%)				
				ST <i>n</i> = 147 (34.3%) SF <i>n</i> = 101 (23.6%) NF <i>n</i> = 90 (21.0%) NT <i>n</i> = 90 (21.0%)				
				SJ <i>n</i> = 215 (50.2%) SP <i>n</i> = 33 (7.7%) NP <i>n</i> = 38 (8.9%) NJ <i>n</i> = 142 (33.2%)				
				TJ <i>n</i> = 204 (47.7%) TP <i>n</i> = 33 (7.7%) FP <i>n</i> = 38 (8.9%) FJ <i>n</i> = 153 (35.7%)				
				IN <i>n</i> = 113 (26.4%) EN <i>n</i> = 67 (15.7%) IS <i>n</i> = 132 (30.8%) ES <i>n</i> = 116 (27.1%)				
				ET <i>n</i> = 97 (22.7%) EF <i>n</i> = 86 (20.1%) IF <i>n</i> = 105 (24.5%) IT <i>n</i> = 140 (32.7%)				
Jungian Types (E)			Jungian Types (I)			Dominant Types		
	<i>n</i>	%		<i>n</i>	%		<i>n</i>	%
E-TJ	76	17.8	I-TP	12	2.8	Dt.T	88	20.6
E-FJ	62	14.5	I-FP	14	3.3	Dt.F	76	17.8
ES-P	20	4.7	IS-J	119	27.8	Dt.S	139	32.5
EN-P	25	5.8	IN-J	100	23.4	Dt.N	125	29.2

Note: N = 428 (NB: + = 1% of N)