

## General:

Individual Differences is an example of the **Nomothetic Approach** - looks for 'universal' laws. Rigorous attention to measurement, production of testable theories. Contrasts with the **Idiographic** approach - which looks at the behaviour and lives of individuals (e.g. psychoanalysis, humanistic psychology)

Roots are in **psychometrics** - **Galton**. Measured characteristics such as reaction times and used stats to analyse distributions and individual differences within populations.

'Commonsense' is the source of psychometric theories that **describe** personality. The individual differences approach emphasises similarities and differences in terms of personality **traits**, trait dimensions or personality dimensions. These are **bipolar** in nature.

### Commonsense / Implicit Theories

These approaches are based on an assumption of **consistency** - personality is an inner disposition that remains constant over time. They also assume coherence - aspects of personality 'hang together'. Trait theories mirror implicit theories - they all start with the **lexical hypothesis** that language has a meaningful relationship with personality.

Personality descriptions are usually hierarchical in nature - **higher order traits** (e.g. conscientiousness) are made up of **surface traits** (e.g. punctuality) which in turn are made up of **behaviours, beliefs, preferences & habits** (e.g. I don't like to be late).

Trait theories use closed format questionnaires filled in by large numbers of participants. Aggregation and standardisation of results makes it possible to use statistics to look for patterns and determine personality dimensions. Large samples required. **Factor analysis** used to group traits together. Traits are **hypothetical constructs**.

Trait theories **describe**, but do **not explain** personality.

## Bk 1, Ch 5: Personality - Individual Differences

### Three Trait Theories of Personality

#### 1. Cattell - 16PF

Used the **inductive-hypothetico-deductive spiral** to create his test. Bipolar traits measured - e.g. Sober-Enthusiastic; Practical-Imaginative; Cool-Warm. Believed a large number of factors were necessary to properly describe personality due to its complexity.

Analysis of different occupational groups gives support - e.g. Physicists & Artists 'cooler' than 'warmer' airline hostesses!

#### 2. Costa & McCrae - OCEAN

A five factor model - Openness, Conscientiousness, Extraversion, Agreeableness, Neuroticism, determined from the use of the NEO-PI questionnaire. NEO-PI is a psychometric test that is designed to be **reliable** (same results for an individual every time) and **valid** (measures what it is supposed to measure). The test is calibrated to give the results of an individual meaning.

Validity - **Face validity** (traits appear to make sense)  
**Construct validity** (extent to which the test measure the construct it claims to measure)  
**Convergent validity** (evidence from other independent tests confirm validity)  
**Criterion validity** (can link test to behaviour)

Research shows personality as calculated by OCEAN is stable - when over 30 yrs and over a 6 year period.

The five factors were chosen by analysing other tests and selecting the five most common/useful traits that these identified.

OCEAN has been translated into many languages, but uses an **etic** approach - assumes that personality factors are common across all languages.

### 3. Goldberg - 'Big Five'

Factors:

I (Extraversion), II (Agreeableness), III (Conscientiousness), IV (Emotional Stability), V (Intellect)

Goldberg's agenda is different to the pragmatism of Costa & McCrae. His research is interested in asking the question if the five factors are the same in all cultures - an **emic** approach using the language's own lexicon.

**Saucier** - If the five factors are the same, it either provides evidence for the **biogenic assumption**, that personality is innate in our genetic makeup, or for the **sociogenic assumption** - that regularity in human environments and social groups has led different cultures to encode personality in the same ways.

**Goldberg's** research is important because it tries to link evolutionary psychology with the cultural expression of personality.

Trait theories can be evaluated by looking for correlations within the data ( $r=1$  move together,  $r=-1$  move in opposite directions). e.g. would expect laziness & punctuality to be negatively correlated. Which surface traits "go together" is subject to a degree of interpretation of the data by researchers.

16PF & OCEAN are perpetuated by the psychometric tests they have generated as the shape of the questionnaire is such as to measure just the factors chosen in these theories.

Big Five contrasts with this as it is not looking for a single 'correct' model - instead, looking for cross cultural differences. I,II,III have found to have been generally stable across cultures, IV and V not so.

e.g's Only I,II,III apparent in Spanish & Italian  
IV splits into two in Filipino  
I-V consistent across Northern European languages

## Type Theory of Personality

**Eysenck** - attempts to *explain* personality by using three personality dimensions and linking them to biological explanation. Originally used just two factors; P added later. (Can be criticised that this is too few).

E - Extraversion (--> Intraversion)  
N - Neuroticism (--> Emotional Stability)  
P - Psychotism (--> Superego)

The Eysenck Personality Questionnaire (EPQ) is used to measure each dimension.

**Eysenck** suggests that E is due to differences in cortical arousal (ARAS) and that this is genetically determined. Introverts are chronically over-aroused and so behave in a way to reduce this arousal. There is evidence to suggest that the greater the arousal, the easier a person is to condition - the idea of 'a weak nervous system'.

**Eysenck** suggests differences in N are due to differences in the limbic system.

**Eysenck** is important as it attempts to link genetics to brain subsystems to basic psychological processes such as learning. Widespread psychometric evidence for this theory as well as physiological evidence - e.g. alcohol makes introverts behave more like extraverts.

**Eysenck** - Individual differences in brain structure and functioning are inherited, therefore personality is inherited genetically to a large extent.

**Zuckermann** criticises **Eysenck** as there appears to be no biological basis for E & N - or for P.

In another psychobiological model, **Gray** proposes the subsystems that are most important in explaining personality are *sensitivity to reward* and *sensitivity to punishment* - and that links between brain function & personality are primarily in the traits *impulsivity* & *anxiety* - which appear in all trait theories to some extent.

## Three approaches to studying inheritance

### 1. Molecular Genetics

Serotonin neurotransmitter is linked to neuroticism (**Goldberg, Lesch**). Evolving field - Human Genome Project is stimulating further research in this field.

### 2. Temperament

**Buss & Plomin** - EAS

E - Emotionality; A - Activity; S - Sociability

**Kagan's** longitudinal studies on cautiousness & boldness in children show that 2/3rds of 'bold' children at 4 months are still 'bold' at 2 years.

Diary data kept by parents and teachers is also used - however, confounding effects from memory weaknesses and constructions placed on children by parents do happen.

### 3. Behavioural Genetics

#### Heritability Studies

MZ-DZ twin studies - general finding is that a 30% heritability of neuroticism is observed in MZ twins => 70% comes from the environment (rarely measured, but inferred). Other findings show most temperament and personality traits have high genetic influences. e.g. Extraversion-Intraversion and EAS dimensions of temperament have heritability estimates of approx 50%.

MZ twins reared apart studies are often small sample sizes (e.g. **Shields** was only 44 pairs) and may include separation late in childhood - e.g. after 6-12 months.

#### Larger samples / meta-studies:

**Pedersen** et al - 328 twin pairs, 99 MZA, 229 DZA  
and 372 twin pairs, 160 MZI, 212 DZI

Estimate of heritability of neuroticism was 0.25 using a modified EPQ. However, some reared apart were separated very late - e.g. at 5 years old. Psychoanalysts would argue much of psychological development may already be complete by that age.

**Eaves** et al re-analysed all twin studies up to 1976 and estimated heritability of neuroticism to be 0.29

**Loehlin & Nichols** - 800 twins; heritability of neuroticism was 0.53. This study and others showed that a 'shared family environment' has little or no influence on temperament or personality - as these are *non-standard environments* - **Dunn & Plomin**:

- i. Each child experiences their environment differently
- ii. Children modify their own environment & those with different temperaments seek out different aspects of their environment.
- iii. Each child's environment, within the family (e.g. birth order) is different! In some families MZ twins are encouraged to be identical, in others, not. Families label children as quiet, energetic etc.

**Stern** found that 'tuning' happens - e.g. a mother matches/under-matches her child's behaviour to attempt to shape their personality.

#### Challenges to Individual Differences

**Mischel - Situationism** - argues that our personality is not constant, but we vary it depending on who we are with and the situation we find ourselves in. *Modular personalities*. Support for this idea comes from:

**Hartshorne & May** - study of cheating in children - even when it was beneficial to cheat and there was no chance of detection, some children did not do so *all of the time* (which individual differences would predict would happen).

**Zimbardo's** prison experiment found that role taking took place - and that even guards who had been psychometrically tested beforehand did not behave in accordance with what was predicted by the tests. Personality could be related to *identity* and *role*

It is possible that individual differences tests are not complete (and so could explain the above) - i.e. traits such as negative valence and religiousness are not picked up by most. Influenced by what is seen to be 'acceptable', perhaps.