

TWO KINDS OF CONTINUITY

Absolute Continuity

- constancy in the quantity or amount of an attribute over time

Differential continuity

- stability of individual differences in scores
 - the consistency of individual differences within a sample of individuals over time, to the retention of an individual's relative placement in a group
- individuals' relative standing one another on a given dimension
- low differential continuity does not tell us in what direction people change

** absolute continuity and differential continuity are completely unrelated*

DIFFERENTIAL CONTINUITY IN THE ADULT YEARS

Longitudinal studies

- remarkably high differential continuity in personality traits over adult lifespan
- Ratings that make up the Big Five dimensions of Extraversion & Neuroticism = strong longitudinal consistency

CHILDHOOD PRECURSORS: FROM TEMPERAMENT TO TRAITS

Six temperament dimensions in infants (first year)

(Rothbart, 1986)

- activity level
- smiling and laughter
- fearfulness
- distress to limitations
- soothability
- vocal activity

THE LOGIC OF TWIN AND ADOPTION STUDIES

Heritability quotient

- Estimates the proportion of variability in a given characteristic that can be attributed to genetic differences between people

Rough Estimate of Heritability in Twin Studies

$$h^2 = 2 (r_{mz} - r_{dz})$$

→ MZ correlation minus DZ correlation X 2

→ h^2 : heritability quotient

r_{mz} : correlation between respective trait scores for MZ twins

r_{dz} : correlation between respective trait scores for DZ twins

Behavior Genetics

Explores the empirical evidence concerning the relative influences of genetic and environmental factors in accounting for variability in human behavior (Rowe, 1997)

HERITABILITY ESTIMATES OF TRAITS

- Virtually all personality traits that can be reliably measured are at least moderately heritable

NONSHARED ENVIRONMENTS

6 Categories of Nonshared Family Effects

(Rowe, 1999)

1. perinatal trauma
 - injuries or damage sustained by the fetus before birth
 - differentiate child from other family members from the beginning
2. accidental events
 - physical injuries to winning raffle prize at state fair
 - chance happenings may impact personality
3. family constellation
 - includes birth order + birth spacing b/w siblings
4. sibling mutual interaction
 - children in family interact w/ others in complex ways over time
 - form alliances, competing, cooperating, wide social roles
 - i.e. 3rd daughter close w/ youngest; 2nd child close w/ oldest (only) son
5. unequal parental treatment
 - “Mom always liked you the most!”
 - “Dad played sports with the sons but ignored daughters...”
6. influences outside the family
 - different social groups; teachers, peers, etc.

GENE X ENVIRONMENT INTERACTIONS: NEW FINDINGS FROM NEUROSCIENCE

Serotonin 5-HT transporter gene (5-HTTP)

- involved in producing protein molecules that are responsible for removing serotonin from the synaptic cleft between neurons
- short alleles appear to be linked to somewhat less efficient reuptake of serotonin in the synaptic cleft
 - at least one short allele for 5-HTTP may be a risk factor for anxiety and depression

(Caspi, 2003)

- at least one short allele of 5-HTTP leads to higher levels of depression =
only when combined with negative environmental inputs
- longitudinal study; examined genetic patterns, life history and depressive symptoms in large sample of young adults
 - Depressive symptoms
 - 33%: short allele + 4 highly stressful life event
 - 17%: two long alleles + comparable stress
- important gene x environment interaction
 - interaction of two factors = strong predictor
 - life stress interacts with short 5-HTTP to cause excessive activation of brain's amygdala (Canli, 2004)

DIFFERENT MEANINGS OF CHANGE

Five Traits of Maturity

(Gordon Allport, 1961)

1. Emotional security and regulation of behaviour by social rules designed to reduce interpersonal friction and obtain social rewards
2. Capacity or investing the self in significant life projects and endeavors rather than being preoccupied with immediate needs
3. Capacity for compassionate and intimate relations with others
4. Realistic appraisal of self and others
5. Establishment of personally derived philosophy of life

TRAIT CHANGE IN ADULT YEARS

Meta-analysis of Mean-Level Changes in Personality Traits Across Lifetime (Brent Roberts, Walton, Viechtbauer, 2006)

- Increase on traits related to **Conscientiousness (C)** and **Agreeableness (A)**
 - **Conscientiousness (C)**
 - **Increase** steady from age 20 to 60
 - **Agreeableness (A)**
 - **Creep up very slowly** until age 50
 - 50 to 60: sharp increase then steady off again
- Decrease on traits related to Neuroticism (N, increase in emotional stability)
 - **Neuroticism (N, Emotional Instability)**
 - **Decreases strongly** up to age 40 then levels off =
Emotional stability increase strong as you age
- **Extraversion (E)**
 - Social Dominance
 - **Strong increase** from age 10 to 30
 - Social Vitality
 - **Decreases** after age 50 or so
- **Openness to Experience (O)**
 - Curvilinear trend
 - **Increases** up to age 20
 - **Decreases** after about age 50

PATTERNS OF TRAITS OVER TIME

California Q-sort - Personality Assessment (Jack Block, 1971/1981/1993)

- BLOCK advocated use of expert observers who evaluate overall patterns of traits in people's lives

FEATURE 6.B - HAPPINESS OVER THE HUMAN LIFESPAN

Components of Well-being

(Diener, 1984)

- positive affect
 - negative affect
 - life satisfaction
- (Diener, 1984)

- well-being fluctuates around a set point for every individual
- both divorce and prolonged unemployment exert strong and long-term effects on well-being
- (Lykken and Tellegen): happiness is mainly the luck of the draw, a matter of heritability and chance external events

Study of Positive & Negative Affect in Americans: 25 to 74 years

(Mroczek and Kolarz, 1998)

- Positive Affect
 - Both men and women showed an increase with age
 - Men who also scored high on *EXTRAVERSION* = High levels of positive affect at all ages
- Negative Affect
 - Men: Scores went down over the lifetime
 - Married men: Inverse relation b/w age & negative affect
 - older married men = low levels of negative affect
 - marriage may increasingly help men regulate own emotional states, select kinds of social & instrumental experiences that minimize feelings of sadness, anger and despair
 - Women: Did not show an age-related decrease