PSYC 1010
Exam-AID
Test 1 Review Package

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Preface

This document is intended for PSYC 1010 students who are looking for an additional resource to assist their studies in preparation for the course midterm. It has been created with regard to Dr. Jubis' Fall/Winter 2010/2011 sections and is subject to change for future courses.

References

Weiten, W., & McCann, D. (2010). *Psychology: Themes and variations* (2nd Canadian ed.). Toronto, ON: Nelson.

Contents

Tips for General Midterm Success

1. **Use acronyms and other mnemonics to remember concepts**. For example, use an acronym like "ocean" to remember the Big Five personality traits: **o**penness to experience, **c**onscientiousness, **e**xtraversion, **a**greeableness and **n**euroticism.

2. **Do practice multiple choice questions**. These practice questions will assess your understanding of what you've learned and help you identify areas of weakness. They are found in textbooks, on textbook companion websites, and/or provided by your professor. *Psychology: Themes and Variations* has questions in it and on its online companion website.

3. **Use logic and process of elimination on multiple choice questions**. For example, if you know one of the answer choices is incorrect, then an "all of the above" answer found in the same question must also be incorrect.

4. **Practice writing short answer questions**. If you know ahead of time what the questions will be on the short answer section, make a list of essential points you want to address for each question and practice writing it on paper. If you don't know what questions will be on the short answer section, you could try scanning the material to find concepts that have enough content to be a possible short answer question. Again, you can make a list of essential points for each and practice writing it. Even if they don't show up on the short answer section, doing this helps solidify what you learned.

5. **Get adequate sleep the night before your test**. Sleeping at night helps consolidate what you learned during the day into memory so that it is better remembered in future. Not only does staying up late the night before a test destroy your concentration during the test the next day, but your brain has not effectively learned the material.

Chapter 1: The Evolution of Society

From Speculation to Science: How Psychology Developed

Psychology
- "study of the mind" (from Greek: *psyche* means soul, spirit, or mind, *logos* means study of a subject)

Wilhelm Wundt: German professor who wanted to establish psychology's independence from philosophy and physiology
- favoured scientific approach, which matches the intellectual climate of his time
- 1879: established the first psychology lab at the University of Leipzig
- 1881: established first psychological journal
- credited as founder of psychology
- primary focus was on consciousness: awareness of immediate experience
    - psychology became scientific study of consciousness
- generated around 54,000 pages of books and articles in career
- students from all over came to study with Wundt, and brought what they learned back to their respective places

G. Stanley Hall: contributor to rapid growth of psychology in America
- studied briefly with Wundt
- established first American psychology lab and journal
- driving force behind establishment of American Psychological Association (APA)
    - first APA president
- psychology flourished in the US possibly because American universities were more open to new disciplines, as opposed to traditional European universities

Structuralism: psychology should analyze consciousness' basic elements and investigate the relations of these elements (ex. sensations, feelings, images, perception)
- was at ends with functionalism
- advocated by Edward Titchener (studied with Wundt)
- used **introspection**: careful self-observation of one's conscious experiences (mental processes)
    - subjects trained to be objectively aware of their experience
    - subjects typically exposed to auditory tones, illusions, visual stimulations
- weakness: dependence on an individual's reflection, no objective evaluation

Functionalism: psychology should investigate function/purpose of consciousness
- introduced by **William James**, a brilliant American scholar
- chose to pursue psychology rather than medicine
- published *Principles of Psychology* (1890)
    - probably most influential text in psychology's history

    - psychology is deeply embedded in a network of cultural and intellectual influences
- James was heavily influenced by Darwin's concept of **natural selection**: heritable characteristics that provide a survival or reproductive advantage are more likely than alternative characteristics to be passed on to subsequent generations and thus come to be "selected" over time
- argued structuralists studied static points and not the flow of the **stream of consciousness**
- interested in how people adapt their behaviour to the demands of the real world
- James McKeen Cattell and John Dewey began investigating mental testing, development in children, educational practice effectiveness, and behavioural differences in sexes
    - this new research attracted women to the field
        - Margaret Floy Washburn:
            - first woman to receive a Ph.D. in psychology
            - wrote *The Animal Mind* (1908) which was a precursor to behaviourism
        - Leta Hollingwoth:
            - did work in children's intelligence
            - debunked theories on female inferiority
        - Mary Whiton Calkins:
            - first female president of the APA
- most credit functionalism with winning over structuralism
- fostered development of behaviourism and applied psychology

Behaviourism: scientific psychology should only study observable behaviour (consciousness can't be observed)

- founded by **John B. Watson**
    - proposed psychologists abandon research in consciousness
    - against mental processes research because they are private and can't be verified (includes thoughts, wishes, feelings that accompany behaviour)
    - psychology should study **behaviour**: any overt (observable) response or activity by an organism
    - argued that nurture (in nature versus nurture debate) is primarily responsible for behaviour
        - made radical claim that he could take a random infant and turn he/she into any type of specialist)
- goal became to relate overt behaviour (responses) to observable events in the environment (stimuli)
    - **stimulus**: detectable input from the environment
- behavioural approach also called **stimulus-response (S-R) psychology**
- emergence of behaviourism partly attributed to **Ivan Pavlov**: showed dogs could be trained to salivate in response to a auditory stimulus (example of a stimulus-response bond)
- contributed to rise of animal research

    - benefit: experimenter can exert more “control” over animals subjects than human subjects

Gestalt Psychology
- opposed behaviourism
- argued that psychology should continue to study consciousness
- primarily concerned with perception
- [for insight because the book barely touches on it, Gestalt psychology emphasizes the totality of experience; for example, the sum of the parts (choir members) can’t explain for the whole (a beautiful choir melody)]

Psychoanalytic Theory: aims to explain personality, motivation and mental disorders by focusing on unconscious determinants of behaviour
- **Sigmund Freud** postulated existence of the **unconscious**: contains thoughts, memories and desires that are well below the surface of conscious awareness, but exert great influence on behaviour
    - examples
        - slips of the tongue
        - dreams that reflected feelings unaware by the patient
- controversial notions:
    - people are not the masters of their mind
    - behaviour is greatly influenced by sexual urges (which was taboo for the time)
- psychological disturbances caused by personal conflict existing at unconscious level
- in time, theory won acceptance in medicine and attracted prominent followers Carl Jung and Alfred Adler
- widely viewed as unscientific, thought it would fade away
    - but its critics were wrong, it steadily grew to be extremely popular
    - continued to raise heated debate
    - many of its concepts have filtered into modern mainstream psychology

Radical Behaviourism
- advocated by **B.F Skinner**: young Harvard psychologist (became a household name)
    - influenced by Watson’s methodological behaviourism and Pavlov’s work
    - believed private mental events didn’t need to be studied
- argued psychology could understand and predict behaviour without resorting to physiological explanations
    - organisms tend to repeat responses that lead to desirable outcomes and not to repeat responses that lead to neutral or undesirable outcomes
    - manipulated outcomes in animal testing
        - ex. pigeon learned to play ping-pong
- in *Beyond Freedom and Dignity* (1971), proposed all behaviour governed only by external stimuli
    - people are controlled by environment, free will is an illusion

    - not well received by the public, seen as an attack on free society
- Skinner wrote *Walden Two* (1948) which talked about his utopian society
- behaviourism flourished as the dominant school of thought in psychology in 1950s and 1960s

Humanism: emphasizes unique qualities of humans, especially freedom and potential for growth

- humans different from animals
- grew from opposition to behaviourism and psychoanalytic theory's dehumanizing nature of the human condition
    - humanists take an optimistic view
- **Carl Rogers** asserted that human behaviour is governed by self-concepts (sense of self), which animals lack
- Rogers and **Abraham Maslow**: to understand human behaviour, must understand their drive for personal growth
    - people have basic need to continue to evolve to fulfill potential
    - psychological disturbances result from the thwarting of these unique human needs
- suffered dissent in recent decades, but some are expecting a renaissance

Psychology in Canada

- early psychology classes taught through philosophy department
- 1838: first psychology course at Dalhousie University
- 1891: first experimental laboratory in psychology established at University of Toronto by James Mark Baldwin
- 1924: first psychology department at McGill University
- 1939: Canadian Psychological Association (CPA) created
- increasing number of women in psychology:
    - Brenda Milner:
        - contributions to memory
        - one of the founders of neuropsychology in Canada
    - Mary Salter Ainsworth:
        - contributed to attachment theory and study of developmental psychology
    - Mary Wright:
        - contributed to educational psychology and developmental training
        - first female CPA president
    - Doreen Kimura:
        - contributed to the study of the brain, ex. sex differences in cognition
        - founding president of Society for Academic Freedom and Scholarship

Psychology Comes of Age as a Profession

- since 1950s began the age of psychology as a profession
- **applied psychology**: concerned with everyday, practical problems

    - first applied arm was **clinical psychology**: branch concerned with diagnosis and treatment of psychological problems and disorders
    - in the beginning, most psychologists were researchers, not clinicians
    - WWII prompted need for clinicians to treat soldiers suffering trauma
        - many liked the clinical work so much they remained as a clinician post-war
        - Veteran's Administration (VA) financed many new training programs in clinical psychology
- rift created between research and professional sectors for funding
    - prompted American Psychological Society (APS): advocate of exclusively research
        - counterpart in Canada is the Canadian Society for Brain, Behaviour and Cognitive Science (CSBBCS), established in the early 1990s
- expansion of applied psychology into school, industrial and organizational, and counselling psychology
- most psychologists today involved in some kind of practice

Cognitive and Physiological Perspective

- **cognition**: mental process involved in acquiring knowledge
    - conscious experience and thinking
- dominance of behaviourism discouraged investigation of mental processes
- **Jean Piaget** (Swiss psychologist) focused on children's cognitive development
- **Noam Chomsky** brought attention to psychological underpinnings of language
- Herbert Simon and colleagues did research on problem solving
- must study mental events to understand behaviour
    - have found scientific methods to do this that weren't traditionally used
- some argue cognitive psychology has become dominant perspective in psychology
- James Old (Canadian psychologist) showed electrical stimulation of different brain regions can evoke emotional response in animals
- Roger Sperry showed right and left halves of brain are specialized for different types of mental tasks
- David Hubel and Torsten Wiesel did work on how visual signals are processed in the brain
- Donald Hebb published *The Organization of Behaviour: A Neuropsychological Theory* (1948) which attracted interest of international scholars
    - emphasized the locus of behaviour in the brain
    - suggested repeated stimulation leads to **cell assemblies** to develop
        - cell assemblies resemble cognitive units that together or in concert with other cell assemblies facilitate behaviour
    - emphasis on neural network are organized and function
- many different psychology fields have shown increased interest in neuroscience
- **neuroethics**: concern for how information concerning our brain and its connection to behaviour is used

- **biological perspective**: human and animal behaviour can be explained in terms of the bodily structures and biochemical processes that allow organisms to behave

Increased Interest in Cultural Diversity

- in the past, assumed that the general principles of behaviour apply to all of humanity
- psychology is largely Western (North American and European)
    - psychologists are usually white, middle- and upper-class, subjects too
- why has the focus been narrow?
    1. cross-cultural research is costly, difficult, time-consuming
    2. psychologists worry that cultural comparison will foster stereotypes and add further prejudice to cultural groups
    3. **ethnocentrism**: tendency to believe one's group as superior to others and as the standard for judging the worth of foreign ways
- in recent decades, psychologists have devoted increased attention to culture as a factor in behaviour
    - events that prompted change: civil rights movement, women's movement, gay rights movement, etc.
    - reasons:
        - advancements in communication, travel, international trade has shrunk the world into a global community and increased global interdependence
        - ethnic make-up up Western world has become more multicultural
- psychologists are now:
    - learning about how culture is transmitted through socialization and how that colours one's view of the world
    - learning how people cope with cultural change and finding ways to reduce misunderstandings in intercultural interactions
    - enhancing understanding on how cultural groups are affected by prejudice, discrimination and racism
    - above all: understand unique experiences of culturally diverse people from the point of view of those people

Evolutionary Psychology: examines behavioural processes in terms of their adaptive value for members of a species over the course of many generations

- natural selection favours behaviour that enhances an organism's reproductive success
    - those genes are successfully passed on to the next generation
    - human mind was sculpted by natural selection too
- **Irwin Silverman** and colleagues suggest gender differences originated in human evolution as a result of sex-based division of labour in ancient hunting and gathering societies
    - male superiority in mental rotation and navigation developed due to successful hunting

    - female superiority in spatial skills developed due to successful gathering of food (memory for locations)
- not a completely new perspective since William James and other functionalists were influenced by Darwin
- initially was not influential but since the 1980s, evolutionary psychologists have published widely cited studies on a broad range of topics (ex. jealously, personality, etc.)
    - ex. David Buss, Martin Daly, Margo Wilson, Leda Cosmides, and John Tooby
- opposition:
    - many evolutionary hypotheses are untestable
    - evolutionary explanations are speculative and obvious behavioural phenomena
- field is rapidly gaining acceptance

The Positive Psychology Movement

- Martin Seligman launched positive psychology movement after being criticized as "too grumpy" by his daughter
- Seligman argues psychology has neglected the forces that make life worth living
- **positive psychology**: uses theory and research to better understand the positive, adaptive, creative and fulfilling aspects of human existence
    - 3 areas of interest:
        - **positive subjective experiences** (positive emotions): ex. happiness and love
        - **positive individual traits**: ex. personal strengths and virtues
        - **positive institutions and communities**: how societies can foster civil discourse, strong families, healthy work environments, etc.
- criticism:
    - dividing human experience into positive and negative domains is an oversimplification
    - positive psychology will be a fad (Lazarus)

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Psychology Today: Vigorous and Diversified

Psychology: science that studies behaviour and the physiological and cognitive processes that underlie it, and it is the profession that applies the accumulated knowledge of this science to practical problems

- today, academia is the work setting for less than 1/3 of North American psychologists

Major Research Areas in Psychology

- areas:
    1. **Developmental psychology** (23.4%): human development across a life span, not exclusive to child development

2. **Social psychology** (21.1%): interpersonal behaviour and role of social forces in determining behaviour
3. **Experimental psychology** (12.6%): conducting experiments on sensation, perception, learning, conditioning, motivation, emotion, etc.
4. **Physiological psychology** (9.7%): influence of genetics on behaviour and the role of the brain, nervous system, endocrine system and body chemicals in behaviour regulation
5. **Cognitive psychology** (7.7%): "higher" mental processes (ex. memory, reasoning, information processing, language, problem solving, decision making, creativity)
6. **Personality** (4.2%): describing and understanding individuals' consistency in behaviour, as well as factors that shape behaviour and personality assessment
7. **Psychometrics** (4.8%): measurement of behaviour and capacities through psychological tests, as well as the development of new techniques for statistical analysis

- other fields accounts for 16.5%
- specialization is needed because psychology has become too vast
- most psychologists receive broad training, later specialization in a certain field

Professional Specialties in Psychology

1. **Clinical psychology** (68.8%): evaluation, diagnosis and treatment of individuals with psychological disorders, as well as treatment of less severe behavioural and emotional problems (includes interviewing, psychological testing, psychotherapy in group and individual format)
2. **Counselling psychology** (14.8%): like clinical, except they specialize with people and their everyday problems (often family, marital or career counselling)
3. **Educational and school psychology** (8.4%): improve curriculum design, achievement testing, teacher training, etc. and help children having difficulties and aid in solving school-related issues
4. **Industrial and organizational psychology** (5.7%): work in business and industry, ex. running human resources, working to improve morale and job satisfaction and productivity, examining organizational structure, etc.

- other fields accounts for 2.3%
- some psychologists work on research and application, some academic psychologists practice on a part-time basis
- clinical psychologists go to graduate school to earn a doctoral degree
- psychiatrists go to medical school and earn an M.D. degree, then they specialize by completing residency training in psychiatry at a hospital
- clinical psychologists and psychiatrists differ on their approach to patient treatment
- **psychiatry**: branch of medicine concerned with the diagnosis and treatment of the psychological problems and disorders (clinical psychology takes nonmedical approach)

Putting It in Perspective: Seven Key Themes

Themes Related to Psychology as a Field of Study

1) Psychology Is Empirical

- **empiricism**: premise that knowledge should be acquired through observation
- psychologists must have a healthy dose of skeptical attitude and critical thinking skills

2) Psychology Is Theoretically Diverse

- psychologists seek to explain and understand what is observed
- **theory**: system of interrelated ideas used to explain a set of observations
    - ex. Freud's unconscious theory relates dreams to slips of the tongue
- no single theory can explain everything about behaviour, an event can be seen through several perspectives
    - ex. in physics, light considered particle and wave
    - all theories can have some validity
- contemporary psychologists view theoretical diversity as a strength because differing perspectives often offer a more complete understanding of behaviour than one perspective alone

3) Psychology Evolves in a Sociohistorical Context

- psychology develops in a social and historical context
    - physics was popular in the late 19th century, therefore psychology was more scientific
    - WWII reshaped the landscape of psychology
    - in recent years, cultural diversity prompted more attention in cultural differences
- psychology has in turn influences society, ex. parenting style, created intelligence tests, etc.

Themes Related to Psychology's Subject Matter

4) Behaviour Is Determined by Multiple Causes

- behaviour is exceedingly complex, determined by multiple causes (not one)
    - problematic for people who find a single cause
- psychologists believe in multifactorial causation of behaviour

5) Behaviour Is Shaped by Cultural Heritage

- cultural determinants are prominent factors in behaviour, culture exerts great influence
- **culture**: widely shared customs, beliefs, values, norms, institutions, and other products of a community, transmitted socially across generations
    - applies to very tiny groups and nonethnic groups as well
- personal heritage not openly observable

- culture influences one's behaviour, thoughts, feelings
    - ex. someone eating all the food they are served in North America is respectful, but in India this practice is considered rude
- culture influences variety of subjects, ex. vulnerability to physical disease, educational success
- diversity can also exist within a cultural group

6) Heredity and Environment Jointly Influence Behaviour

- historically, nature-versus-nurture debate framed as an all-or-none proposition
    - Francis Galton argued exclusively for genetics (nature)
    - John Watson argued exclusively for nurture
- research has shown genetics and experience jointly influences one's intelligence, temperament, personality, susceptibility to psychological disorders

7) People's Experience of the World Is Highly Subjective

- people actively process incoming stimulation, selectively focusing and ignoring information
    - impose organization stimuli attended to
    - perception is personalized and subjective
- people can be biased in their experience:
    - sometimes people see what they want to see based on motives
    - people tend to see what they expect to see
        - ex. someone described as cold was seen less favourably, whereas someone described as warm was seen more favourably
- scientific method designed to counteract subjectivity
    - psychologists strive to make objective observations

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Featured Study: Bullying in Canadian Schoolyards

Discussion

- study used naturalistic observation of bullying episodes in the schoolyard
- study found bullies and competent children equally capable of bullying
- bullying did not occur in an isolated social setting, peers became involved to some extent
- strengths: no constraints of a laboratory (no scientific intervention)
- flaw: strapping microphones to the kids may have biased results
- bullying is increasing in females and has been expanded to refer to relational and control-oriented bullying which is high among females

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Featured Study: Improving Academic Performance

Discussion

- good study habits:
    - set up a schedule to study

        - written schedules more effective because they act as reminders and can increase commitment
    - find a good place to study where you can concentrate
    - reward studying
        - because the long-term reward of doing well is far away
        - type of behaviour modification technique
- improving reading:
    - **SQ3R**: study system designed to promote effective reading, which includes five steps: survey, question, read, recite and review
        - **survey**: look over the topic to understand what you will be reading
        - **question**: asking questions gets you involved in what you are reading
        - **read**
        - **recite**: test to see if you understand the material
        - **review**: refresh your memory by going over key points again
- getting more out of lectures:
    - class attendance associated with class performance
    - attentive note-taking associated with enhanced learning and performance
    - active listening, reading ahead, writing lecture material in your own words, and asking questions are all good techniques for getting the most out of lectures
- **testwiseness**: ability to use the characteristics and format of a cognitive test to maximize one`s score
    - research shows changing answers pays off
    - ensure you are progressing at a reasonable pace if time is a constraint
    - don't waste too much time on difficult questions
    - review your test answers if you have time left
    - in multiple choice questions, use process of elimination and be attentive to important key words (ex. only, always)
    - in essay exams, it is usually a good idea to spend time initially planning and organizing the essay before diving into it

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Critical Thinking Application: Developing Critical Thinking Skills: An Introduction

Critical Thinking: use of cognitive skills and strategies that increase probability of a desired outcome

- is purposeful, goal-directed thinking that involves solving problems, formulating inferences, working with probabilities and making carefully thought-out decisions
- critical thinking skills include application of understanding principles of scientific investigation, formal and informal rules, careful evaluation of information, analysis of arguments
- effective cognitive thinking requires both the:
    - cognitive component: knowledge of skills
    - emotional or affective component: attitude or disposition of a critical thinker

- skills are **transcontextual**: useful in a wide variety of contexts
- skills and attitudes need to be deliberately and consciously taught because they aren't readily apparent to a person
- examples of critical thinking: alternative explanation of phenomena and consideration of contrary evidence

Chapter 2: The Research Enterprise in Psychology

The Scientific Approach to Behaviour

Goals of the Scientific Enterprise

1. *Measurement and description*: design a way to measure behaviour and a way to describe it clearly and precisely
2. *Understanding and prediction*: explain reasons for phenomena, which can be evaluated by a **hypothesis**: tentative statement about relationship of variables
3. *Application and control*: try to solve issues through research, and understand behaviour by developing a **theory**: system of interrelated ideas used to explain a set of observations, which is testable and can generate new hypotheses

Steps in Scientific Investigation

- scientific investigation is **systematic**

Step 1: Formulate a testable hypothesis

- translate a theory or intuitive idea into hypothesis (normally a prediction)
- variables must be carefully defined using an **operational definition**: describes the actions or operations that will be used to measure or control a variable

Step 2: Select the research method and design the study

- plan empirical testing method (ex. experiments, case studies, surveys, naturalistic observation, etc.)
    - balance pros and cons of each and select the most appropriate method
- decide on **participants** or **subjects**: persons or animals whose behaviour is systematically observed in a study

Step 3: Collect the data

- researchers use a variety of **data collection techniques**: procedures for making empirical observations and measurements
- examples of techniques: direct observation, questionnaire, interview, psychological test, physiological recording, examination of archival records

Step 4: Analyze the data and draw conclusions

- observations converted to numbers (raw data)
- statistics used to analyze data

Step 5: Report the Findings

- write a concise summary of study and its findings
- typically findings are placed in a report to be delivered at a scientific meeting and submitted for publication in a **journal**: periodical that publishes technical and scholarly material, usually in a narrowly defined area of inquiry
- findings are critically evaluated by other experts for flaws, which can lead to results being discarded, which helps in weeding out erroneous findings

Advantages of the Scientific Approach

1. *Clarity and precision*: enhances communication of ideas

2. *Relative intolerance to error*: scientists try to find accurate and dependable results
    - psychologists are trained to be skeptics
    - scrutinize others' work closely with critical eye (objective data and thorough documentation are important)

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Looking for Causes: Experimental Research

Research methods: various approaches to observation, measurement, manipulation and control of variables in empirical studies

- 2 basic types: experimental and descriptive/correlational

Experiment: research method where investigator manipulates a variable under carefully controlled conditions and observes any changes in the second variable

- **independent variable**: condition/event that an experimenter changes to see its impact on another variable
    - free to be manipulated by experimenter
- **dependent variable**: condition/event that is thought to be affected by independent variable's manipulation
    - usually patient's behaviour in psychology
- **experimental group**: subjects receive some special treatment in regard to the independent variable
- **control group**: subjects who do not receive the special treatment given to the experimental group
- it is crucial that experimental and control are alike in nature
    - ex. David Wolfe's experiment found abused teens improved more in the psychoeducational intervention program (experimental group) than abused teens the Child Protection Services program (control group)
- **extraneous variable**: any variable other than dependent or independent variable that seems likely to influence the dependent variable
    - ex. in Dutton and Aron's experiment, risk-taking behaviour is an extraneous variable because if one group was more risk-taking in general, that would have biased the results of the experiment
    - can create **confounding of variables**: 2 variables are linked together in a way that makes it difficult to sort out their specific effects
        - when an independent variable confounds with an extraneous variable, the researcher can't tell which is having the effect on the dependent variable
- to control for confounding, researchers can use **random assignment**: subjects randomly assigned to a group
- ex. in Dutton and Aron's experiment, a follow-up study was done to control for personality differences (ex. risk-taking behaviour) where males only crossed a high bridge but were approached by the female confederate immediately after crossing (high arousal) or 10 minutes after crossing (less arousal)

- male participants showed more sexual arousal and were more likely to call back the female confederate

Variations in Experiment Design

1. *Using one group of subjects for both control and experimental*
   - participants are exposed to both experimental and control conditions
   - no worry of differences between groups
2. *Testing for more than 1 independent variable*
   - can see if 2 variables have an **interaction**: effect of variable #1 depends on the effect of variable #2
3. *Testing for more than 1 dependent variable*
   - provides a more complete picture of the independent variable's effect

Experimental Research

- advantages:
  - allows cause-and-effect relationships to be found because there is control in experiment
- Disadvantages
  - limitations in realism, situations are often artificial/contrived
  - can't explore certain topics due to ethical concerns
    - ex. growing up in rural or urban setting = can't ethically manipulate this independent variable

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Looking for links: Descriptive/Correlational Research

Descriptive/Correlational Research Methods

- describes patterns of behaviour, and links/associations between variables
- advantage: can go beyond ethical boundaries, thus broadening the scope of phenomena that psychologists can study
- disadvantage: lack control, which means cause-and-effect relationships can't be found, only associations can be established

1. Naturalistic observation: researcher engages in careful observation of behaviour without intervening directly with the subjects

- ex. Levine and Norenzayan studied pace of life of 31 countries
  - studied the walking speed, accuracy of public clocks, and postal clerk speed
  - fastest in Western Europe and Japan, slowest in Mexico and Indonesia
  - fastness associated with colder climate, economic vitality or populations size
- advantage: occurs in natural environment
- disadvantage: often difficult to make observations without being unobtrusive

2. Case study: in-depth investigation of an individual subject

- Finnish team studying suicides

    - case studies of suicide victims called **psychological autopsies**
    - 93% suffered a significant psychological disorder (most common were depression and alcohol dependence)
- normally involve interviewing, observation, examination of records, psychological tests
- case study research looks at collections of case studies to find patterns
- good for researching psychological disorders and neuropsychological issues
    - ex. Brenda Milner used case studies extensively in her work in neuropsychology
        - her most well-known case is H.M. famous for his memory loss
- advantage: can provide compelling, real-life illustrations to support theory
- disadvantage: can be highly subjective

3. Surveys: questionnaires and interviews used to gather information about specific aspects of participants' behaviour
- used for a variety of purposes
    - ex. political polls, opinions on social issues, mental disorder prevalence, etc.
- advantage: can obtain information on aspects of behaviour that are difficult to observe
- disadvantages:
    - possible distortion of results caused by wishful thinking, memory lapse, poorly worded questions, etc.
    - possible sampling bias = sample is not representative of the interested population

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Looking for Conclusions: Statistics and Research

Statistics: use of math to organize, summarize and interpret numerical data
- allow researchers to draw conclusions based on their observations

Descriptive Statistics: used to organize and summarize data (overview)
- **central tendency**: averages or typical scores
    - **median**: score that falls exactly in the center of a distribution of scores
    - **mean**: arithmetic average of a distribution of scores
        - most useful because additional statistical manipulations can be performed on it
        - disadvantage: sensitive to extreme scores
    - **mode**: most frequent score in a distribution
- **variability**: how much the scores in data set vary from each other and from the mean
    - **standard deviation**: index amount of variability in a set of data
        - greater variability = greater standard deviation (and vice versa)
- **correlation**: two variables are related to each other

- **correlation coefficient**: numerical index of the degree of relationship between 2 variables
  - indicates **direction** of relationship (positive/negative) and the **strength** of the relationship
  - a positive correlation means variables co-vary in the same direction
  - a negative correlation means variables co-vary in the opposite direction
  - size of the coefficient indicates the strength of correlation
    - can vary between –1.00 to +1.00
    - 0 = no relationship, 1.00 = perfect relationship
    - *note*: -.65 is a stronger relationship than +.45
  - as a correlation increases in size, ability to predict grows
    - but remember correlation doesn't tell us if cause and effect exists
    - it is possible a third variable (Z) may cause X and Y

Inferential Statistics: used to interpret data and draw conclusions
- used to evaluate the possibility of results being due to fluctuations of chance
- to prove a hypothesis we need **statistical significance**: exists when the probability that the observed findings are due to chance is very low (fewer than 5 chances in 100, which is called the 0.05 level of significance)
- significant does not mean important or practical, it just means something is unlikely due to chance
- comparing the results of many studies is called a **meta-analysis**: results of several studies are integrated to allow for conclusions regarding the set of observed results

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Looking for Flaws: Evaluating Research

Evaluating Studies
- scientists are fallible human beings who do not conduct flawless research
- scientists can commit personal biases in research which distort research findings
- very important to see if studies have **replication**: repetition of a study to see whether the earlier results are duplicated (helps identify and purge errors)

1. Sampling Bias: sample is not representative of the population from which it was drawn from
- **sample**: collection of subjects for observation in an empirical study
- **population**: the larger collection of animals or people where sample is drawn from
- in the past, ethnic groups, women, non-Westerners not represented well in research studies

2. Placebo Effect: participants' expectations lead them to experience some change even though they receive empty, fake or ineffectual treatment

- **placebo**: substance that resembles a drug, but has no pharmacological effect
- participants' expectations are powerful determinants, some people improve from their expectations (but were in fact given placebos)
- placebos should be given to the control group to see if the experimental group's results are significantly different from the control group's results
- studies found meditation can improve energy, mental and physical health, happiness, but it was also noted that a lot the subjects expected and wanted meditation's beneficial results

3. Distortions in Self-Report Data

- psychologists often work with a subject's verbal account, but it can be distorted
- subjects can express the **social desirability bias**: tendency to give socially approved answers to questions about oneself
    - ex. someone saying they donated to charity when they didn't
    - can be problematic in prejudice and stereotype research
    - new tests developed by Bertram Gawronski rely on *implicit measures* which aren't influenced by the social desirability bias
- miscommunication can also distort data
    - ex. respondents misunderstand question
    - ex. questions' wording can shape answers
- people can also have a **response set**: tendency to respond to questions in a particular way unrelated to the content of the questions
    - ex. person agrees or disagrees with everything

4. Experimenter Bias: researcher's expectations or preferences about the outcome of a study influence results (ex. seeing what they want to see)

- researchers can be emotionally-invested in their work and can begin to see what they want to see
- subtle nonverbal signals can constitute this kind of bias, ex. the experimenter nodding or smiling when a participant gives desirable responses
- solution: **double-blind procedure**: experimenter or subject doesn't know which subjects are from the control or experimental group

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Looking into the Future: The Internet and Psychological Research

Internet-mediated research: studies in which data collection is done using the Web

- various studies are being conducted online
- in addition, social interaction in online communities can be studied by researchers using naturalistic observation
- advantages:
    - larger and more diverse samples can be polled online
    - data can be effortlessly obtained 24 hours a week and 7 days a week, as opposed to having research assistants run studies

- disadvantages:
    - potential for sampling bias
        - not everyone has access to the Internet
    - Web studies tend to have lower participation and higher dropout rates than conventional studies
    - studies have less control than traditional studies
        - ex. can't control the physical conditions (ex. room temperature, lighting) in which participant is participating in the survey
- despite the disadvantages, it is likely to grow because of its potential to yield more diverse and representative samples than traditional approaches
    - control issues have been found to be minimal,
    - increased anonymity of participating online can also reduce social desirability bias

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Looking at Ethics: Do the Ends Justify the Means?

Ethical Concerns

- generally concerned with the usage of deception and the participation of humans and animals in research
- some studies can be dangerous
    - ex. Tuskgee Syphilis Study: a group of black men in a study not informed that they had the disease
- major criticism:
    - deception is a euphemism for lying, which is still immoral
    - psychologists may undermine many individuals' trust in others
    - many deceptive studies produce distress in participants who were not forewarned
- psychologists are serious about client and participant protection
- ethical principles outlined by the CPA:
    - respect for the dignity of persons
    - responsible caring
        - must protect the person's rights, privacy, personal liberty and self-determination
        - take the necessary precautions to protect vulnerable populations (ex. children
    - integrity in relationships
    - responsibility to society
        - research must increase knowledge and promote welfare of all human beings
    - for animals, discomfort must be minimized and the results must demonstrate benefits to both humans and animals
- ethics boards or committees at universities must approve of research

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Featured Study: Can Fear Increase Sexual Attraction?

Discussion

- Dutton and Aron's experiment tested if unambiguous fear or anxiety can be relabelled as sexual attraction
- all participants were male
- participants who crossed the high bridge (high anxiety) showed more sexual arousal in their TAT stories and were more likely to call their female confederate back (who met them after crossing the bridge) than those who crossed the low bridge (low anxiety)
    - Thematic Apperception Test (TAT): projective test where a subject creates a story for an uncaptioned picture
- study used a naturalistic experimental procedure with subjects who were not recruited from undergraduate psychology courses

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Personal Application: Finding and Reading Journal Articles

Technical Journals

- **journal**: periodical that publishes technical and scholarly material in narrowly defined area of inquiry
    - often difficult to read because they are written by professionals, intended for the professional community

Finding Journal Articles

- newspapers and magazines can mention research at times, but usually only ones with sensationalist conclusions and after oversimplifying and committing factual errors
- **PsycINFO**: computerized psychology database that allows one to locate journal articles by specific researchers or by specific topics
    - contains **abstracts**: a concise summary of a study's hypotheses, methods, results and conclusions

Reading Journal Articles

- **abstract**: concise summary at the beginning of each article
- **introduction**: overview of the problem studied and provides a review of related literature
    - usually progresses to a precise statement of the study's hypothesis
- **method**: thorough description of research methods, including the participants and data collection techniques
- **results**: reports the data obtained from the study
- **discussion**: conclusions drawn by the author(s) and the implications and limitations of the findings
- **references**: rich sources of works cited in the article

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Critical Thinking Application: The Perils of Anecdotal Evidence: "I Have a Friend Who…"

Anecdotal evidence: personal stories about specific incidents or experiences

- can be very attractive because they are concrete, vivid and memorable
- shortcomings:
    - like case studies, reliable conclusions can't be drawn (they are not systematic)
    - like self-report data, they are susceptible to distortion
        - ex. social desirability bias
    - often inaccurate and riddled with embellishments
        - anecdotal evidence often consists of stories that people have heard about others' experiences
- when anecdotal evidence is suspect, use **evidence-based decision making**: making decisions using solid evidence and critical thinking skills

Chapter 12: Personality: Theory, Research, and Assessment

Nature of Personality

Personality: individual's unique constellation of consistent behavioural traits

- *distinctive* from others, and *consistent* across situations
- **personality trait**: durable disposition to behave in a particular way in a variety of situations
- some traits are more basic than others
    - ex. impulsive, restless and impatient can be all derived from more basic trait of high excitability
    - debate over the fundamentals traits required to fully describe personality
- Raymond Cattell derives 16 basic dimensions of personality using **factor analysis**: correlations among many variables are analyzed to identify closely related clusters of variables (basic, higher-order traits)
- Robert McCrae and Paul Costa five-factor model of personality called the **Big Five** using factor analysis:
    - **extraversion**
        - sometimes referred to as *positive emotionality*
        - high score: outgoing, friendly, upbeat, gregarious, etc.
    - **neuroticism**
        - sometimes referred to as *negative emotionality*
        - high score: anxious, hostile, insecure, etc.
        - tend to overreact more to stress than others
    - **openness to experience**
        - high score: curiosity, flexibility, imaginativeness, etc.
        - fosters liberal beliefs in the person
        - key determinant of political ideas and ideology
    - **agreeableness**
        - high score: sympathetic, trusting, modest, etc.
        - low score: suspicious, antagonistic, aggressive
        - associated with approaches to conflict resolution
    - **conscientiousness**
        - sometimes referred to as *constraint*
        - high score: well-organized, disciplined, punctual, etc.
        - associated with diligence at work
    - scales predictive of certain aspects of behaviour:
        - ex. high extraversion associated with higher popularity and more dating behaviour
        - ex. high conscientious associated with higher grades, primarily because they work harder
        - ex. neuroticism associated with elevated prevalence of physical and mental disorders

        - conscientious people live longer
    - model has become dominant conception of personality in contemporary psychology
    - criticism:
        - higher-order traits depend on exact mix of wider set of lower-order traits
        - sixth factor: honesty-humility?
        - frugality, humour, etc. not accounted for

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Psychodynamic Perspectives

Psychodynamic Perspective: include all the diverse theories descended from the work of Sigmund Freud that focus on unconscious mental forces

- Sigmund Freud grew up during a time of sexual repression and aggressive hostilities (no wonder they emerged as themes in his later theories)
- treated mental disorders using **psychoanalysis**: lengthy verbal interactions with patients during which Freud would probe deeply into their lives
- psychoanalytic theory focus on early childhood experiences, unconscious motives and conflicts and how people cope with sexual and aggressive urges
- controversial notions:
    - people's behaviour is governed by the unconscious
    - childhood experiences shaped adult personality meant peoples' destinies were beyond their control
    - emphasis on how people cope with their sexual urges offended Victorian values of the time
- 3 components of personality structure:
    - **id**: primitive, instinctive component of personality that operates according to the pleasure principle
        - reservoir of psychic energy (motivation for all behaviour, ex. eating, sleeping, having sex, etc.)
        - operates on **pleasure principle**: immediate gratification of urges
        - engages in **primary-process thinking**: primitive, illogical, irrational, fantasy-oriented thinking
    - **ego**: decision-making component of personality that operates according to the reality principle (decides how one behaves)
        - seeks to maximize gratification by mediating between the id's forceful desire for immediate satisfaction and external world's expectations and norms regarding appropriate behaviour
        - operates on **reality principle**: delaying gratification of the id's urges until appropriate outlets and situations can be found
        - engages in **secondary-process thinking**: relatively rational, realistic and has problem-solving orientation
            - strives to avoid negative consequences of society by behaving "properly"
            - achieves long-term goals that require putting off gratification

    - **superego**: moral component of personality that incorporates social standards about what represents right and wrong
        - emerges at around 3 to 5 from the ego, when children internalize what behaviour is good and bad
        - can be irrationally-demanding in striving for moral perfection
            - ex. suffering from excessive guilt
- 3 levels of awareness:
    - **conscious**: consists of whatever one is aware of at a particular moment
    - **preconscious**: contains material just below surface of awareness that can easily be retrieved
        - ex. what you had for breakfast
    - **unconscious**: contains thoughts, memories and desires that are well below the surface of conscious awareness but that nonetheless exert great influence on behaviour
        - ex. childhood trauma, hostility towards parent
        - existence inferred by Freudian slips and dream content because they reveal hidden desires
        - id is entirely unconscious
    - ego and superego operate on all 3 levels of awareness
    - id is completely unconscious, while the ego and superego exist in all 3 levels
    - id's desires expressed at a conscious level through ego
- intrapsychic conflict:
    - arises between id and the ego and superego
        - ex. id wants you to clobber an obnoxious co-worker, but the ego holds this desire back
    - sexual and aggressive impulses most important
        - norms governing these are more subtle and inconsistent = creates confusion
        - more regularly thwarted than any other urge
            - easier to get a drink when thirsty than to have sex when lustful
    - causes anxiety, from either ego worrying that:
        - id gets out of control, causing something terrible that leads to severe negative consequences
        - superego gets out of control and makes one feel guilty about a real or imagined transgression (violation of law)
        - distressing, but controlled by defence mechanisms
- **defence mechanism**: largely unconscious reaction that protects a person from unpleasant emotions such as anxiety and guilt
    - usually self-deceptions
    - **rationalization**: creating false but plausible excuse
        - ex. "everybody else does it"
    - **repression**: keeping distressing thoughts and feelings buried in the unconscious
        - forgetting something that is aversive to think about

        - most basic and most widely used
        - typically have impoverished memory and avoid the unpleasant by distracting oneself with the pleasant
    - **projection**: attributing one's own thoughts, feelings or motives to another
        - ex. a woman who dislikes her boss thinks she likes her boss, but feels that the boss doesn't like her
    - **displacement**: diverting emotional feelings (usually anger) from their original source to a substitute target
        - ex. taking anger out on material objects
    - **reaction formation**: behaving in a way that is exactly the opposite of one's true feelings
        - ex. parent who unconsciously resents a child spoils the child with gifts
    - **regression**: reversion to immature patterns of behaviour
        - ex. adult temper tantrum
    - **identification**: bolstering self-esteem by forming an imaginary or real alliance with some person or group
        - ex. insecure man joins a fraternity to boost self-esteem
- **psychosexual stages**: developmental periods with a characteristic sexual focus (physically-gratifying) that leave their mark on adult personality
    - **fixation**: failure to move forward from one stage to another as expected
        - stalls in respective stage, which affects later adult personality and can be the root to mental disorders
        - results from excessive gratification or frustration at attaining the psychosexual need
    - **stage 1: oral stage**
        - age 0-1
        - erotic focus: mouth → sucking, biting, etc.
        - task: weaning (moving from breast or bottle)
        - fixation from this stage can lead to later obsessive eating or smoking later on
            - [excessive gratification = **oral receptive personality**: needy and submissive, especially toward oral activity like oral sex and smoking]
            - [deprived of gratification = **oral aggressive personality**: manipulative to achieve goals and uses mouth-based aggression]
    - **stage 2: anal stage**
        - age 2-3
        - erotic focus: anus → expelling or retaining feces
        - task: toilet training (first attempt of society trying to govern biological urges)
        - punitive toilet training (using punishment) can lead to hostility towards trainer and association of genital concerns and anxiety that punishment arouses (sexual activities arouse anxiety)
        - [anal fixation:]

            - [keeping in feces = **anal retentive personality**: neat and perfectionistic]
            - [always expelling feces = **anal expulsive personality**: lacking self-control, messy and careless]
    - **stage 3: phallic stage**
        - age 4-5
        - erotic focus: genitals → masturbation
        - **Oedipal complex**: children manifest erotically tinged desires for their opposite-sex parent, accompanied by hostile feelings toward their same-sex parent
            - taken from ancient Greek myth where Oedipus was separated from his parents at birth and inadvertently later killed his father and married his mother
        - *Oedipus complex* for boys and *Electra complex* for girls, but this was not endorsed by Freud himself
        - crucial task: cope with Oedipal crisis by identifying with same-sex parent to resolve hostility
            - continued hostility may interfere with identifying with that parent
    - **stage 4: latency stage**
        - age 6-puberty
        - no erotic focus
        - marked by expanding social contacts beyond immediate family
    - **stage 5: genital stage**
        - from puberty and onwards
        - erotic focus: genitals → being sexually intimate
        - directed onto peers of other sex, as opposed to self like in phallic stage

Carl Jung

- developed *analytical psychology* to differentiate it from Freud's psychoanalytic theory
- emphasized unconscious determinants of personality like Freud, but divided unconscious into:
    - **personal subconscious** (outer layer): houses material that is not within one's conscious awareness because it has been repressed or forgotten
        - *exact same* as Freud's description of the unconscious
    - **collective unconscious** (deeper layer): storehouse of latent memory traces inherited from people's ancestral past
        - contains the whole spiritual heritage of mankind's evolution born anew in the brain of every individual
        - ancestral memories are **archetypes**: emotionally charged images and thought forms that have universal meaning
        - evidence comes from similarities between cultures, ex. **mandala** (magic circle): symbol of unified wholeness of the self
- first to describe:

  - **introverts**: tend to be preoccupied with the internal world of their thoughts, feelings and experiences
  - **extroverts**: tend to be interested in the external world of people and thing

Alfred Adler

- developed *individual psychology* which emphasized how social forces shape personality development
- foremost motivation force in peoples' lives is **striving for superiority**: universal drive to adapt, improve oneself and master life's challenges
  - prime goal in life, not physical gratification
- overcome feelings of inferiority via **compensation**: efforts to overcome imagined or real inferiorities by developing one's abilities
  - compensation is normal
- **inferiority complex**: excessive feelings of inferiority
  - caused by parental neglect or parental pampering
  - some will surpass normal process of striving for superiority and engage in **overcompensation** to conceal feelings of inferiority
  - unconscious self-deception where one is immersed in luxury rather than reality
- suggested birth order influences personality
  - ex. only children receive excessive attention from parents
  - ex. first child would develop feelings of jealousy for the younger sibling because the first child was "dethroned"
  - Frank Sulloway believes birth order more related to Big Five traits
    - first child tend to be more conscientious, less agreeable, more conventional and achievement-oriented
    - later-borns tend to be more liberal and rebellious

Evaluation of Psychodynamic Perspectives

- *poor testability*: can't perform systematic experiments to verify theories
- *inadequate evidence*: heavy reliance on case studies
- *sexism*: bias against women
  - Freud believed females' penis envy made them feel inferior to males and that females develop weaker superegos and more prone to neurosis

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Behavioural Perspectives

Behaviourism: theoretical orientation based on the premise that scientific psychology should study only observable behaviour

- John Dollard and Neal Miller tried to translate Freudian concepts into behavioural terminology

B.F. Skinner

- people show consistent patterns of behaviour because they have some stable response tendencies that they have acquired from experience (from **operant conditioning**)
- personality is fully **determined** by environmental stimuli by means of operant conditioning (punishment, reinforcement, extinction)
    - ex. joking at a party is reinforced by peoples' laughter = tendency to tell jokes at parties increases (person is comedic)
    - no need to look "inside" person, ex. cognitive processes
- personality is mechanically-shaped, requiring no conscious effort
    - personality is determined, free will is an illusion
- response tendencies are constantly being strengthened and weakened
    - therefore personality is a continuous, lifelong journey
- mental disorders are the result of maladaptive behaviour due to faulty learning

Albert Bandura

- **social learning theory** draws more emphasis on cognitive factors
    - Bandura refers to model as *social cognitive theory* now
- agrees with behavioural view that personality is shaped largely by learning
    - however, believes people are proactive in attaining desirable consequences and avoiding undesirable consequences
- advocates **reciprocal determinism**: internal mental events, external environmental events and overt behaviour all influence one another
- personality (response tendencies) is shaped by **observational learning**: vicariously learning from others' experiences
    - some **models** are more effective than others, ex. models are perceived as powerful, attractive, similar to observer or that their behaviour leads to desirable outcomes
- **self-efficacy**: one's belief about one's ability to perform behaviours that should lead to expected outcomes
    - when high: individuals confident they can execute responses necessary to earn reinforcers
        - associated with greater success in giving up smoking, greater adherence to exercise routines, etc.
    - when low: individuals worry that the necessary responses may be beyond their abilities

Walter Mischel

- social learning theorist like Bandura
- emphasizes that people behave differently in different situations
    - ex. a person may be honest in this situation but dishonest in another
- found that people exhibit far less consistency across situations than previously thought
    - sparked debate concerning personality because personality is described as consistent
- criticism:

    - Mischel reviewed studies of young people, whereby personality has not stabilized (personality does not stabilize until middle age)
    - cross-situational consistency is also hindered by situational constraints that hinder expression
        - ex. fun-loving person won't be as such at a funeral
    - Norman Endler: personality interacts with situational factors to produce behaviour (interactionist)

Evaluating Behavioural Perspectives

- *overdependence on animal research*: caution must be taken to generalize animal behaviour to human behaviour
- *dehumanizing nature of radical behaviourism*: nonexistence of free will and nonimportance of cognition is an extreme notion
- *fragmentation of personality*: should not reduce a complex concept like personality to stimulus-response associations

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Humanistic Perspectives

Humanism: theoretical orientation that emphasizes the unique qualities of humans, especially their freedom and their potential for personal growth

- ushered in as a response to the dehumanizing nature of psychodynamic and behavioural theories
    - emphasis on *optimism*
- believes that humans can rise above primitive animal heritage and control biological urges and that people are largely conscious and rational beings who are not dominated by unconscious, irrational needs and conflicts
- embraces **phenomenal approach**: one has to appreciate individual's personal, subjective experiences to truly understand behaviour
    - ex. if a person sees his/herself as bright, this affects their behaviour

Carl Rogers

- *person-centered theory* focuses on a person's subjective point of view
- personality is the **self-concept**: collection of beliefs about one's own nature, unique qualities and typical behaviour
    - conscious to a person and subjective
- **incongruence**: degree of disparity between one's self-concept and one's actual experience
    - not good for psychological well-being = root of mental disorders
    - small degree of disparity = *congruency* with reality
- **unconditional love** from parents fosters congruence whereas conditional love from parents fosters incongruence (distort self-concept to match expectations of others)
- experiences that threaten people's personal self-concept cause anxiety
    - people with high incongruent self-concepts are prone to recurrent anxiety

    - people alleviate anxiety by acting defensively so that they can reinterpret their experience so that it appears consistent with their self-concept
        - ex. deny, ignore, or twist reality to protect or perpetuate

Abraham Maslow

- human needs are organized into a **hierarchy of needs**: systematic arrangement of needs, according to priority, in which basic needs must be met before less basic needs are aroused
    - usually portrayed as a pyramid
    - from the bottom: satisfaction activates needs at the next level
        - physiological needs
        - safety and security needs
        - belongingness and love needs
        - esteem needs
        - cognitive needs
        - aesthetic needs
        - **self-actualization**: need to fulfill one's potential
- people have an innate drive toward personal growth (like Maslow proposed)
- **self-actualizing people**: people with very healthy personalities, marked by continued personal growth
    - accurately-turned into reality, at peace with themselves, open and spontaneous, fresh appreciation for surroundings, sensitive to others' needs, have more **peak experiences** (profound emotional highs) than others, etc.

Evaluating the Humanistic Perspective

- *poor testability*: hypotheses are hard to study
    - how to define and measure self-actualization?
- *unrealistic view of human nature*: self-actualizers are very rare = most people don't fulfill their potential?
- *inadequate evidence*: not much empirical evidence

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Biological Perspectives

Hans Eysenck

- personality structure is a hierarchy of traits in which superficial traits are derived from 3 fundamental higher-order traits (which are bipolar):
    - **extraversion–introversion**: extraverts are sociable, assertive, active and lively
    - **stability–neuroticism (instability)**: neurotics are anxious, tense, moody and low in self-esteem
    - **psychoticism–self-control**: psychotics are egocentric, impulsive, cold and antisocial
- personality is largely due to genetic inheritance

- introversion and extraversion are shaped by inherited differences in arousability and ease of conditioning
    - ex. introverts inherit higher arousability, which means they are more easily conditioned and thus acquire more conditioned inhibitions than extraverts
        - more inhibitions causes them to turn inward
- identical twins show more similarity in Big Five than fraternal twins
    - criticism: identical twins treated more similar than fraternal twins = similar environment for identical twins may be responsible
    - response: identical twins reared apart more similar in Big Five than fraternal twins reared together
    - 40%-50% heritability estimates
    - another twin study yielded similar heritability estimates
        - used personality tests but also peer ratings
- shared environment has been found to have very little impact on personality
    - suggests that parents don't matter, that they wield very little influence over how their children develop
    - criticism:
        - behaviour genetic studies have underestimated environment's role
        - developmental psychology has demonstrated parental significance
        - children may also be treated differently in the home

Evolutionary Approach to Personality

- personality has biological basis because natural selection has favoured certain traits throughout human history
- David Buss proposes Big Five traits had significant adaptive implications (provided survival and reproductive advantages)
    - extraversion: ability to bond with others
    - agreeableness: willingness to cooperate and collaborate with others
    - conscientiousness: tendency to be ethical and reliable
    - openness to experience: capacity to be an innovative thinker
    - low neuroticism: ability to handle stress
- Daniel Nettle asserts Big Five traits themselves are the products of evolution
    - more extreme than Buss
    - ex. extraversion promoted mating success
    - traits are a trade-off between its benefits and costs

Evaluating Biological Perspectives

- heritability ratios are only ballpark estimates, no magic number to be discovered
- no comprehensive biological theory of personality provided by Eysenck or evolutionary models

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Contemporary Empirical Approach to Personality: Terror Management Theory

Terror Management Theory: psychological consequences of the juxtaposition of a biologically rooted desire for life with the awareness of the inevitability of death

- evolved capacity for complex thought allows human to be keenly aware of inevitability of death and that this could happen at any time unexpectedly
- faith in **cultural worldview** gives person a sense of order and meaning, which soothes fear of inevitable death
- **self-esteem** acts as an *anxiety buffer* when thinking about death
    - thinking that one is a valuable contributor in the universe in accordance to cultural worldview curbs anxiety surround death
    - subjects in a study bolstered their self-esteem to reduce anxiety when approached with the topic of death (manipulated **mortality salience**)
- increasing mortality salience (making death more apparent) associated with more defence and identification with cultural worldview
    - ex. subjects advocated harsher punishments, showed more respect to cultural icons, etc.
    - as well as negative views of other cultural worldviews
- behaviour is the result of preserving culture and maintaining self-esteem
    - ex. materialist behaviour explained by yearning to promote self-worth
    - ex. religious faith increased after 9/11 (mortality salience was elevated)
        - people antagonize cultural outsiders more and want larger-than-life cultural heroes
    - most is subconscious and automatic
- reminders of mortality can be as subtle as driving by a cemetery or funeral home

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Culture and Personality

Culture and Personality

- Eurocentric nature of Freudian theory could not be applied to other cultures, but also because cultures *don't* exhibit a single, dominant personality type
- continuity (similarities) and variability (differences) have been found across cultures
- Big Five has been found in other cultures, suggests some universality
    - but differences in average trait scores, suggests cultural differences
        - ex. Australians high in extraversion, Germans high in openness to experience, etc.
- people have substantial agreement over a **national character** (perceived typical member of their culture), but it has little or no relationship to the *average person* (determined from collected data of real people)
- American culture fosters a more **independent** view of the self
    - emphasis on personal abilities and possessions
    - emphasis on **self-enhancement**: focus on positive feedback from others, exaggerating one's strengths and seeing oneself above average
- Asian cultures foster a more **interdependent** view of the self
    - emphasis on group harmony and relationships
    - define themselves in terms of their relationship and group memberships
    - tend to rate themselves more similar to their peers than Americans

- emphasis on **self-criticism**

Featured Study: The Pope Is Watching You: Effects on Self-Concept

Results and Discussion

- participants primed (shown subliminal stimulus) with a disapproving face of someone of significance caused them to rate their self-concept lower
  - Catholic girls primed with a disapproving pope showed lower self-concept than non-Catholic girls
- participants primed with an approving face of someone of significance caused them to rate their self-concept higher
- therefore, peoples' evaluations (interpersonal information) affects one's self-concept and this process can occur *unconsciously*

Personal Application: Understanding Personality Assessment

Self-report Inventories: personality tests that ask individuals to answer a series of questions about their characteristic behaviour

- **Minnesota Multiphasic Personality Inventory (MMPI)**
  - most widely used due to its effectiveness
  - measures 10 personality traits, ex. paranoia, depression, etc.
  - certain *profile* of scores indicative of psychopathology
    - ex. depressed person high on several traits
- **16 Personality Factor Questionnaire (16PF)**
  - assesses Cattell's 16 dimensions of personality
- **NEO Personality Inventory**
  - developed by Paul Costa and Robert McCrae
  - measures Big Five traits
- strength: objective measure
- possible error from:
  - *deliberate deception*: faking a certain personality
  - *social desirability bias*: faking good
  - *response sets*: systematic tendency to respond to test items, ex. always saying yes
- validity scales, ex. "lie scale" on MMPI can detect deception

Projective Tests: ask subjects to respond to vague, ambiguous stimuli in ways that may reveal subjects' needs, feelings and personality traits

- projective hypothesis: people project their inner personality onto ambiguous stimuli
- **Thematic Apperception Test (TAT)**: participants tell a story from an ambiguous picture of a scenario

    - ex. competitive person may dwell on achievement motives of character on the picture
- **Rorschach Test**
    - can be scored in 6 different ways
- strengths:
    - *transparency*: test-taker doesn't know how their information will be used
    - sensitivity to unconscious content
- weaknesses:
    - poor empirical support
    - susceptible to faking

Personality Testing on the Internet

- most personality tests can be taken over the Internet
- advantages: more convenient, saves labour costs and data flows directly into interpretive software
- disadvantage: other person could take the test for someone

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Critical Thinking Application: Hindsight in Everyday Analyses of Personality

Hindsight Bias: tendency to mould one's interpretation of the past to fit how events actually turned out

- "I knew it all along"
- once results of an event are known, people say the results were obvious
- pervasive in describing personality because people use someone's outcomes to define that person after the fact
    - ex. Freudian theorists looked for specific childhood trauma that support their patient's personality
    - once people know an outcome, theorist can fashion a plausible explanation for it
        - evolutionary theorists do this a lot
- involved in areas outside of personality, ex. getting a second medical opinion

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Appendix B: Statistical Methods

Statistics: the use of mathematics to organize, summarize, and interpret numerical data

Graphing Data

- **Frequency distribution:** an orderly arrangement of scores indicating the frequency of each score or group of scores
- **Histogram:** bar graph that represents data from a frequency distribution
- **Frequency polygon:** line figure used to present data from a frequency distribution
- Graphs can help us understand the data presented but *description statistics* (used to organize and summarize data) provide additional advantages

Measuring Central Tendency

- There are three measures of central tendency:
    - 1) **Mean:** the arithmetic average of the scores
    - 2) **Median:** the score that falls in the centre of the distribution
    - 3) **Mode:** the score that occurs most frequently
- **Symmetric distribution**: measures of central tendency fall together
    - Mean, median, mode all line up in the centre of the distribution
- **Negatively skewed distribution**: most scores pile up at high end of scale
    - Tail points towards the left end
- **Positively skewed distribution**: scores pile up at low end of scale
    - Tail points towards the right end
- In a skewed distribution, the median is usually the best index of central tendency

Measuring Variability

- **Variability:** how much scores tend to vary or depart from the mean score
- **Standard deviation**: index of the amount of variability in a set of data
- If there is a lot of variability in a set of data, then the standard deviation will be larger

The Normal Distribution

- **Normal distribution:** symmetric, bell-shaped curve that represents the pattern in which many human characteristics are dispersed in the population
- Most scores tend to fall near the centre of the distribution (the mean)
    - The number of scores declines when one moves from the centre of the distribution in either direction
- The normal distribution allows us to compare a score to all the other scores in the distribution
- If you know mean and standard deviation of a normally distributed trait, you can tell where any score falls in the distribution of that trait

    - 68% of scores in a distribution will fall within plus or minus one standard deviation
    - 95% of scores in the distribution will fall within plus or minus two standard deviations
- Tests scores that place examinees in the normal distribution can always be converted to percentile scores
- **Percentile scores:** percentage of people who score at or below a particular score
    - Ex: if you score in the 70th percentile, it means that 70% of the people taking that test did the same or below you
        - 30% of score takes did better than you
- Not all distributions are normal

Measuring Correlation

- **Correlation coefficient:** a numerical index of the degree of relationship between two variables
    - *Positive correlation:* as X increases, Y increases or as X decreases, Y decreases
    - *Negative correlation:* as X increases, Y decreases or as X decreases, Y increases
- Magnitude of a correlation coefficient indicates the strength of the relationship between two variables
    - The coefficient can vary between -1.00 and +1.00
    - 0: no relationship between variables
    - +/- 1.00: there is a perfect relationship between variables
- Direction and strength of correlation can be illustrated graphically in scatter diagrams
- **Scatter diagram**: graph in which paired x and y scores for each subject are plotted as single points

Correlation and Prediction

- **Coefficient of determination:** the percentage of variation in one variable that can be predicted based on the other variable
    - Variable x can account for ___% of the variation of variable y
    - Coefficient of determinism goes up as the magnitude of a correlation increases
        - The coefficient of determination is calculated by squaring the correlation coefficient

Hypothesis Testing

- **Inferential statistics**: used to interpret data and draw conclusions
    - Permit researchers to decide whether data supports hypothesis
    - Use a limited sample to make conclusions about the population
    - Use inferential statistics to determine the likelihood that our results are due to chance factors in sampling
- In hypothesis testing, we usually test a null hypothesis

- **Null hypothesis:** assumption that there is no true relationship between the variables observed
    - Ex: There is no association between TV viewing and SAT scores
- **Research hypothesis**: there is a true relationship between the variables observed
- Determine whether results will enable us to reject the null hypothesis and conclude that the research hypothesis has been supported
- Researchers directly test the null hypothesis because:
    - Probability calculations depend on assumptions tied to the null hypothesis
    - We compute probability of obtaining results observed if null hypothesis is true

Statistical Significance

- When we reject a null hypothesis, we conclude that we found statistically significant results
- **Statistical significance:** when the probability that the observed finding are due to chance is very low
    - The minimum requirement for statistical significance is that there is fewer than 5 chances in 100 that the results are due to chance
        - If this is true, the level of significance is 0.05
        - Although, the probability of an error occurring is low, it is never zero
- Statistically significant results support a research hypothesis