

A blue-tinted background image of a classroom. Students are seen from behind, sitting at desks and looking towards a whiteboard. The image is semi-transparent and serves as a backdrop for the text.

PSYC 100

Principles of Psychology

Semester 2

'RAISING MARKS, RAISING MONEY, RAISING ROOFS'

Students Offering Support is a nationally recognized Canadian Charity.



PSYC 100

Tutors and Contact Information:

Gabrielle Gravesande

11gmg5@queensu.ca

Duncan Lurie

11dcl6@queensu.ca

Don't hesitate to message us with any questions!

It is really important that you look at the online lessons as well! A lot of information is covered in the online lessons that isn't in the textbook!



Module 3

- Language
- Genetics
- Intelligence
- Lifespan Development
 - Prenatal, Motor, Cognitive, Social, Gender, Moral, Adolescence



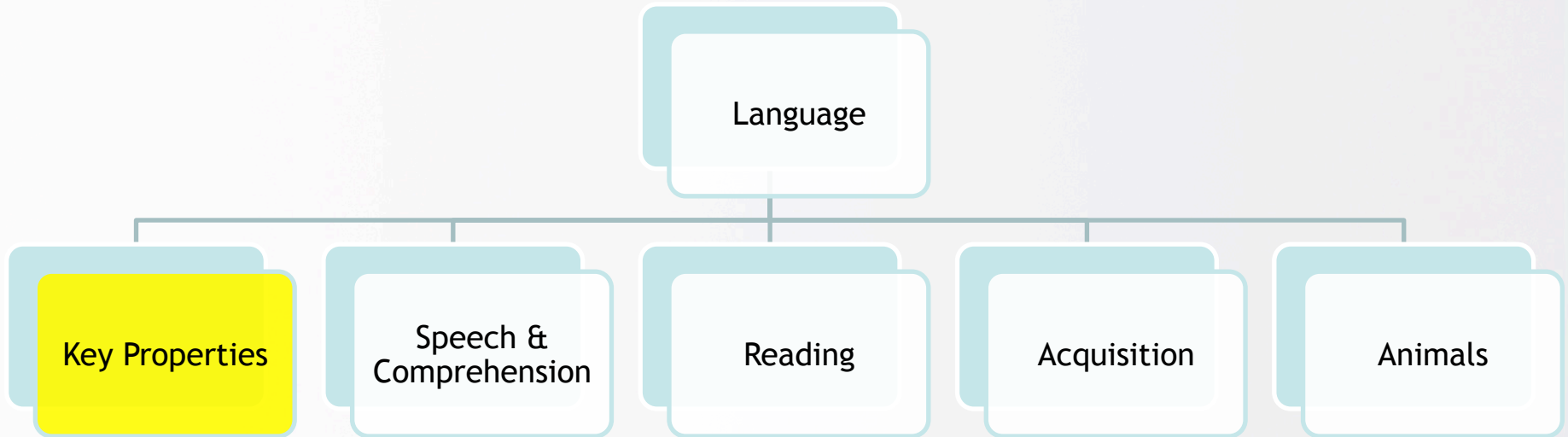
Module 4

- Evolutionary Psychology
- Motivation & Emotion
- Personality
- Social Psychology



Language

Language

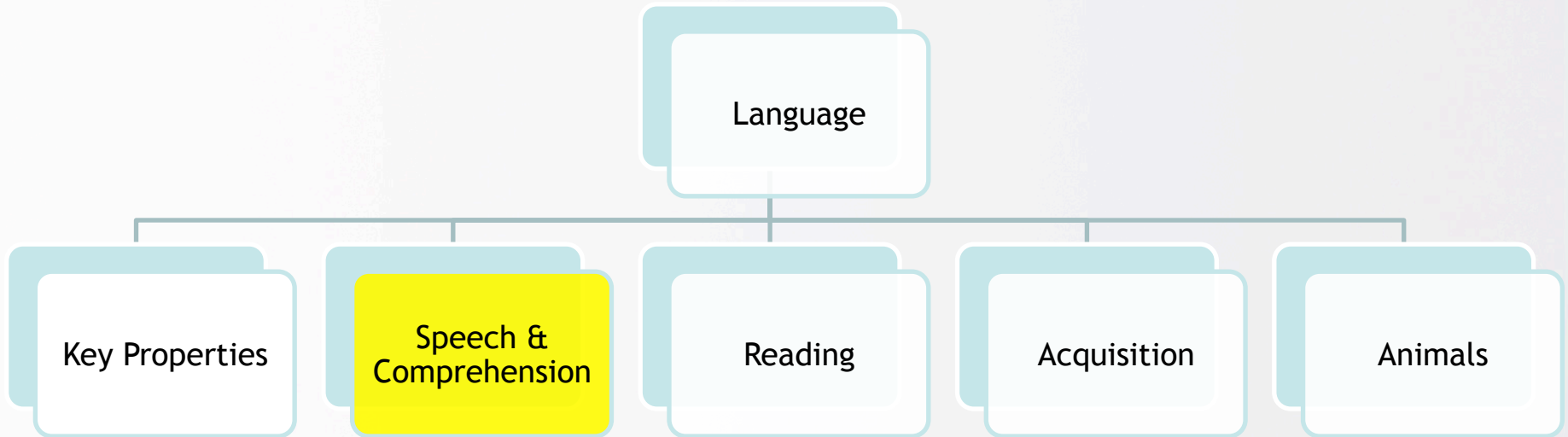




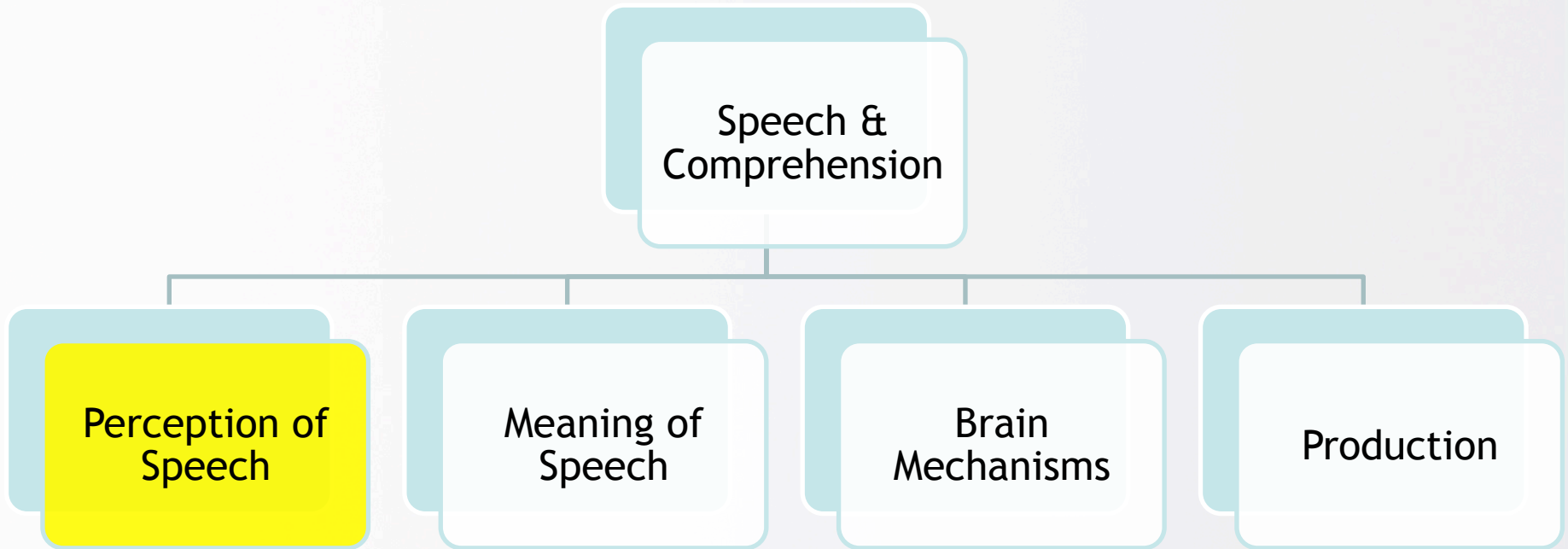
Key Properties

A form of communication must have these 3 key properties in order to be considered language:

- 1. Semanticity:** the extent to which a form of communication can meaningfully represent ideas, events, and objects symbolically
Ex: Human language has a high semanticity because we can talk about many things using symbols vs. the honeybee dance has low semanticity because they do not use many symbols
- 2. Generativity:** use a limited number of words and rules to generate an unlimited number of sentences
Ex. Vervet monkeys fail this because they only have two calls: one for snakes and one for eagles
- 3. Displacement:** can convey messages about things not happening right here and now
Ex. Humans can talk about events in the past and future while vervet monkey alarms only signal a snake or eagle approaching at that moment



Speech & Comprehension



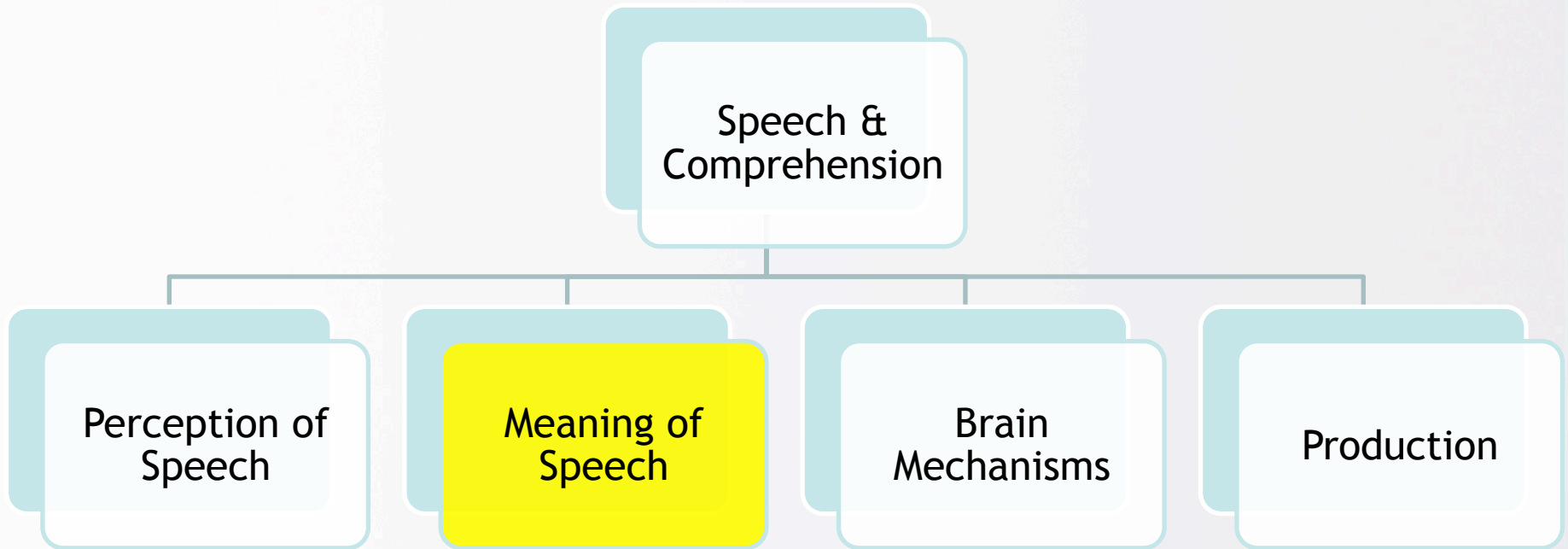


Perception of Speech

- **Phonology:** rules that govern the sounds of a language
 - **Phonemes:** minimum units of sound that convey meaning in language
 - Example: pin has 3 phonemes: /p/ + /i/ + /n/
 - **Phonological rules** govern how phonemes can be combined
 - **Phonemic Discrimination:** perception of phonemes is affected by the sounds that follow them

- **Morphology:** how morphemes can be used and combined
 - **Morphemes:** smallest meaningful units of language
 - Example: Fastest has two morphemes: /fast/ + /ist/
 - **Free morphemes** can stand alone and still have meaning
 - Example: /fast/
 - **Bound morphemes** must be attached to other morphemes to have meaning
 - Example: /ist/

Speech & Comprehension





Meaning of Speech

- **Syntax:** rules for combining words to form phrases and sentences
 - Learned implicitly
 - Cues:
 - Word order: identifies what is doing the action, what is the action, etc.
 - Word class: noun, verb, etc.
 - Function words: relations between content words, ex. the
 - Content words: express meaning, ex. nouns, verbs, etc.
 - Affixes: sounds that we add to the beginning (prefix) or end (suffix) of a word to change its meaning, ex. -ing, -ed
- Word meaning = Semantics
 - Example: “Frank discovered a louse combing his beard.”
 - According to grammar, the louse is combing the beard but according to our knowledge, Frank was doing the combing



Meaning of Speech

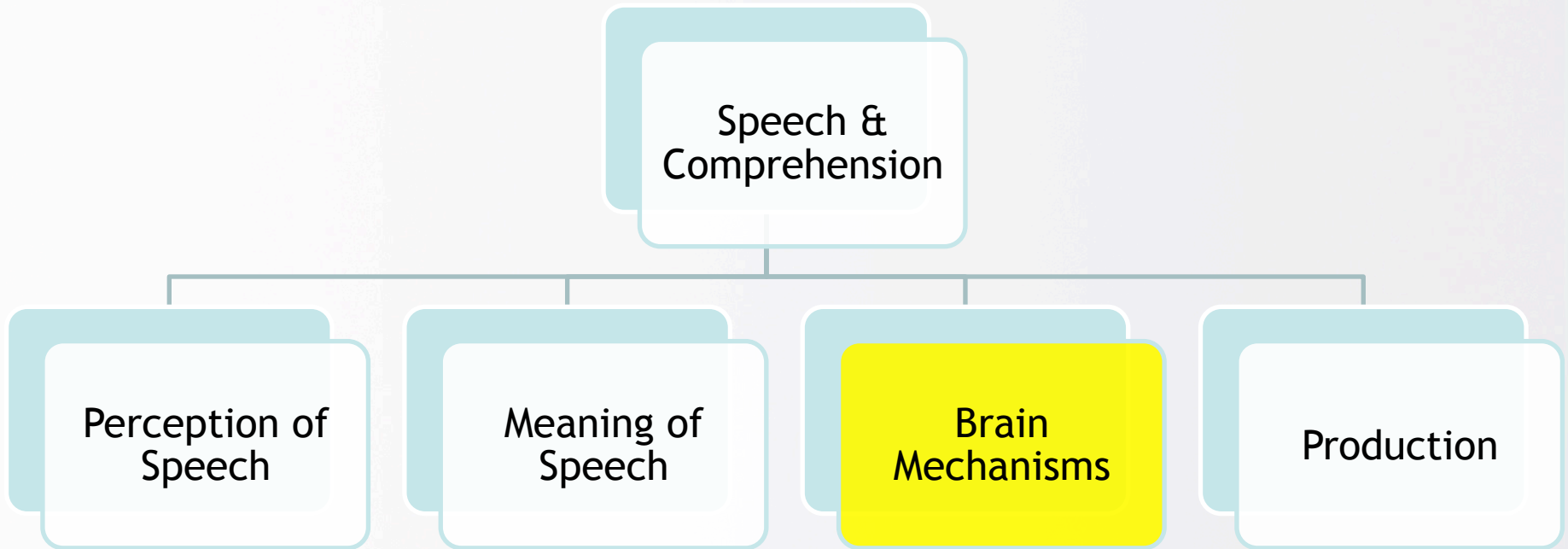
- **Pragmatics:** knowledge related to using and understanding language that helps us to interpret what others are saying
 - Knowledge of the world is organized into scripts, so we can fill in details once we know which script we are using
 - Ex: “I learned a lot about the bars yesterday. Do you have an aspirin?”



Meaning of Speech

- Steps to comprehension of language:
 1. Recognize the sounds/phonemes
 2. Identify the words and associate them with meanings (morphology and semantics)
 3. Analyze the syntax
 4. Interpret the message in its context (syntax, pragmatics, semantics)

Speech & Comprehension



Brain Mechanisms

Brain
Mechanisms

Speech
Production

Speech
Comprehension

Speech Production

- **Broca's area: contains motor memories:** memories of the sequences of muscle movements needed to articulate words
- **Damage to this area causes:**
 - **Broca's aphasia:** slow, non-fluent speech, but you can understand speech
 - **Agrammatism:** difficulty in producing or comprehending grammar
 - Ex. "The mosquito was swatted by the man" - patients understand the mosquito is being swatted because of their knowledge of the world
 - Ex. "The cow was kicked by the horse" - patients do not understand the grammar, so they don't know who is doing what to who

Brain Mechanisms

Brain
Mechanisms

Speech
Production

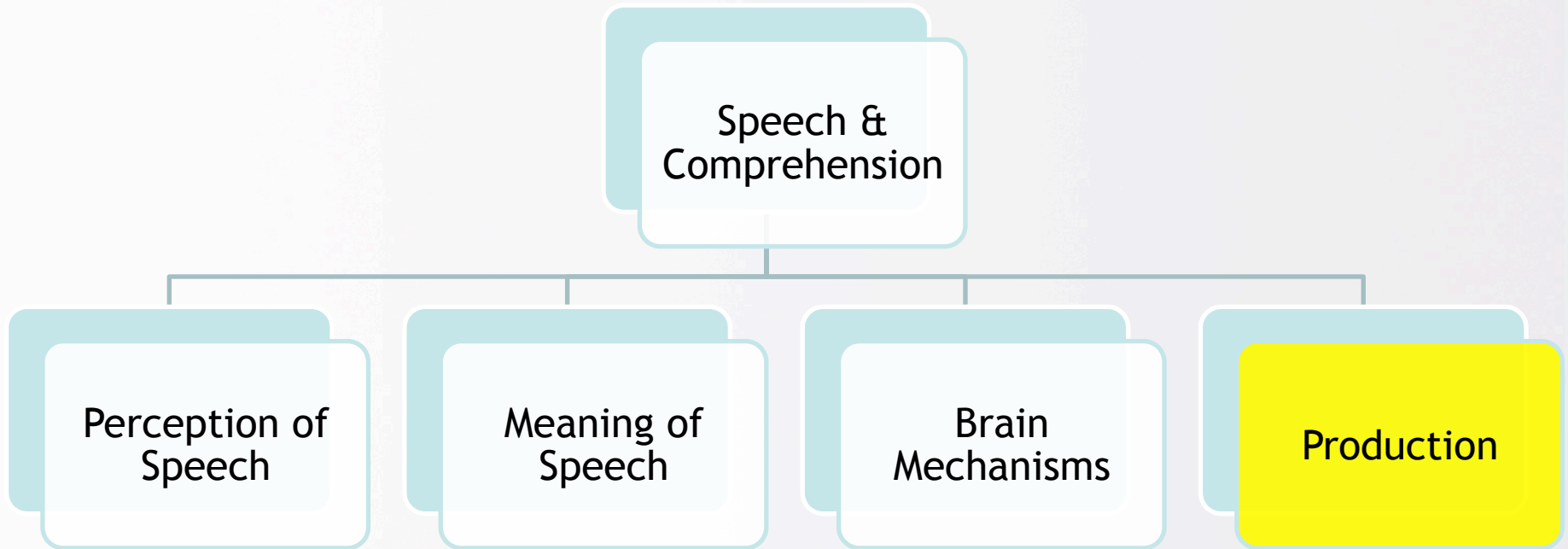
Speech
Comprehension



Speech Comprehension

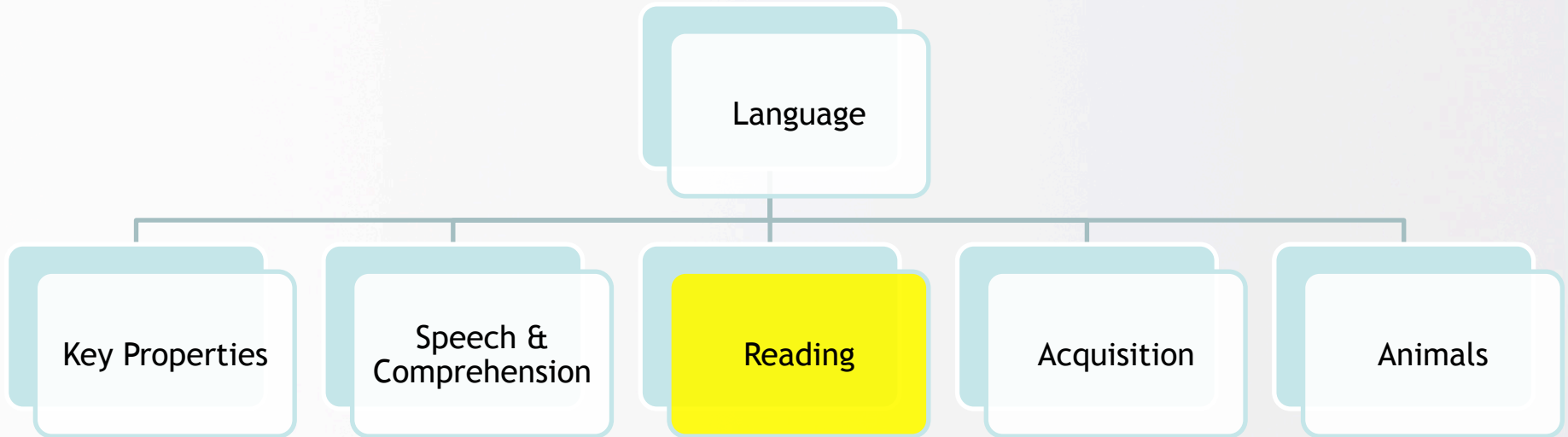
- **Wernicke's area:** location of memories of sequences of sounds that make up words
- **Damage to this area causes:**
 - **Wernicke's aphasia:** poor speech comprehension and production of meaningless speech, but fluent speech

Speech & Comprehension



- **Articulators:** mouth structures that move to make sounds, ex. the jaw, tongue, lips
- **Co-articulation:** pronunciation of one phoneme is affected by what comes before and after it
 - Happens because articulators are preparing to produce the next sound before the last one is finished

- **Categorical perception** allows us to perceive sounds as one phoneme or another when the sound may be ambiguous
 - Infants under 1 year can discriminate between all of the world's phonemes
 - Ex. Japanese babies can distinguish “r” and “l” phonemes until 1 year of age
 - By 1 year, infants can only distinguish phonemes in their native language
 - Ex. English-speaking adults perceive “ra” and “la” as separate sounds while Japanese-speaking adults do not



Reading

Scanning

Phonetic &
Whole-Word
Recognition

Understanding
Meanings



Scanning

- Our eyes make **saccades** (rapid jumps) as we read and we perceive things during brief fixations between jumps
- We fixate more on:
 - Content words
 - Less frequent or unpredictable words
 - Longer words

Reading

Scanning

Phonetic &
Whole-Word
Recognition

Understanding
Meanings



Phonetic & Whole-Word Recognition

We have two basic ways to recognize words:

- **Phonetic reading:** sounding out words
- **Whole-word reading:** recognizing a word as a whole

- Whole-word reading is faster and is necessary because of different pronunciations of the same letter combinations
 - Ex. Climb and limb

- We use the phonetic reading method if the word is unfamiliar and the whole-word reading method if the word is familiar

Reading

Reading

Scanning

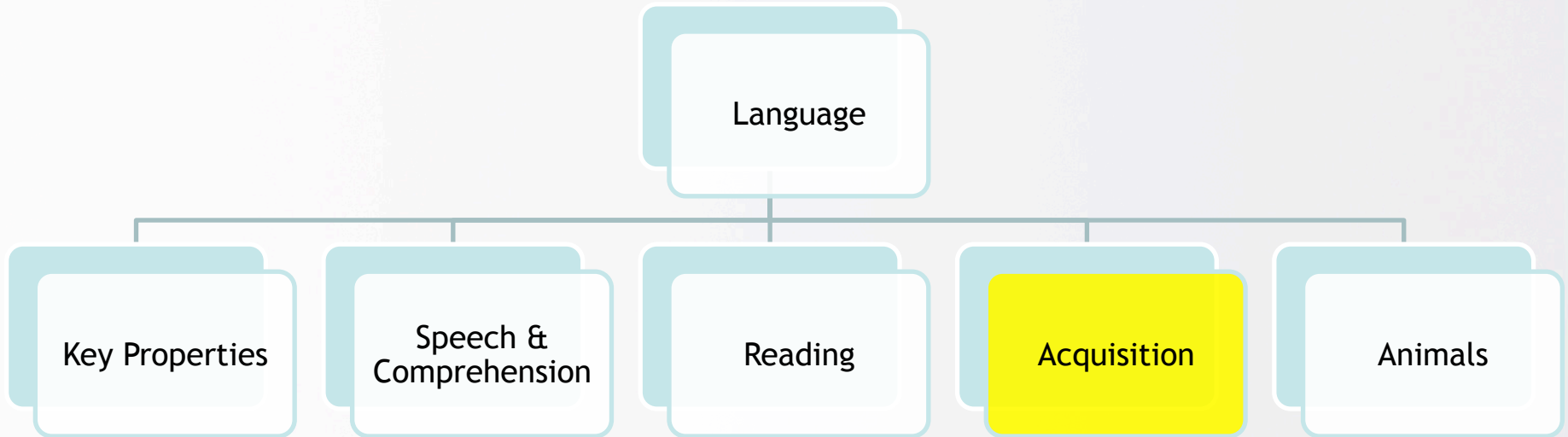
Phonetic &
Whole-Word
Recognition

Understanding
Meanings



Understanding Meanings

- Meanings of content words involve memories
- **Semantic priming:** we recognize words more quickly if they have a meaning related to a previously mentioned word
 - Ex. If we see the word “bread”, we are more likely to make out an image of the word “butter” later on



Acquisition

Acquisition

Theories

Prespeech
Period

Stages

Adult Rules
of Grammar



Theories

Nativists

Interactionists

- Chomsky argues the existence of a language acquisition device (LAD) which contains rules of universal grammar that develops after our first exposure to language
- Components of LAD:
 - Critical period for learning language (during childhood)
 - Makes reinforcement unnecessary
- Learning language triggers activity in Broca's area

- Evidence

- **Critical periods:** specific times when humans must be exposed to something for normal development to occur
 - Language critical period is the first few years of life
 - Ex. Genie was rescued from isolation when she was 13. She experienced severe developmental delays and was never able to develop normally
 - Ex. The Nicaraguan sign language was developed by deaf children as their own sign language; as younger children entered the school, the language developed



```
graph TD; Theories --> Nativists; Theories --> Interactionists;
```

Theories

Nativists

Interactionists

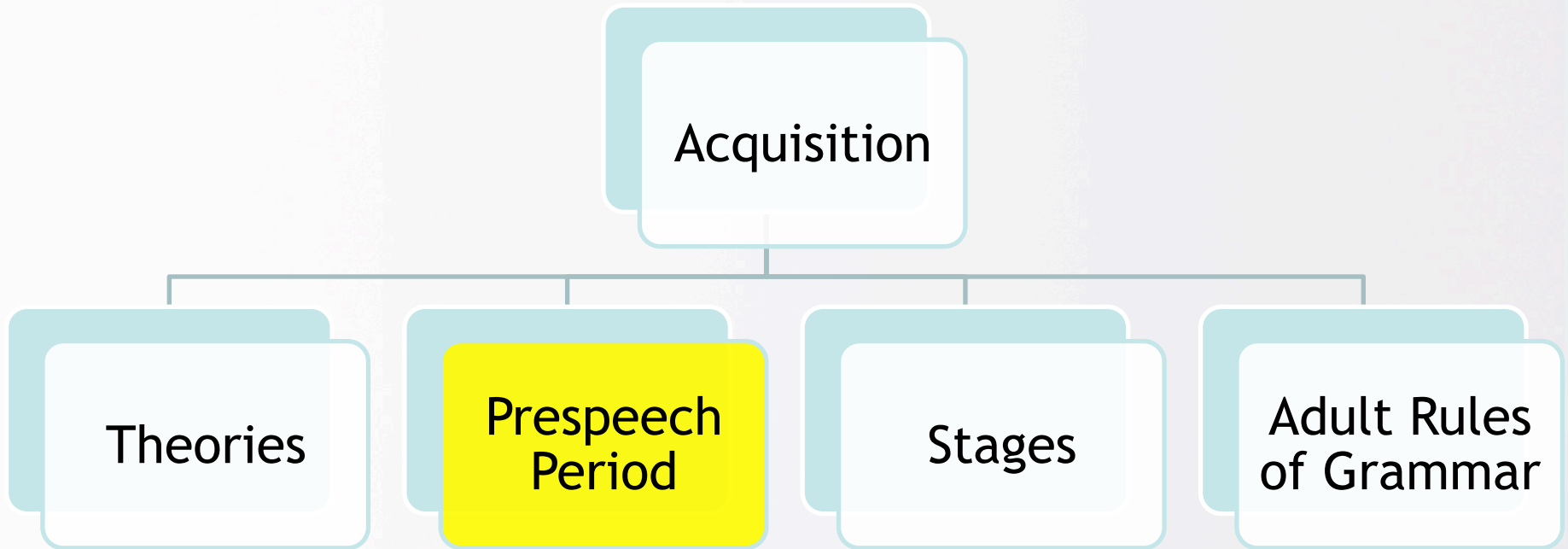
Interactionists

- Language acquisition comes from social environment and experience
- Evidence:
 - We are prepared to learn any language
 - Deaf babies experience many of the same stages as hearing babies when they learn sign language
 - Ex. Coing, parents use exaggerated signs, babbling with hands occurs
 - Kids in bilingual homes learn both languages effortlessly
 - Meet milestones around the same time as monolingual children

Interactionists

- Some learning occurs prenatally
 - Ex. We prefer our mother's voice once we are born
- **Infant directed speech:** adults and older children speak to infants in a specific way
 - High-pitched
 - Slower and clearer pronunciation
 - Exaggerated emotions and facial expressions

Acquisition





Prespeech Period

- Infants can distinguish phonemes in all languages until 1 year
 - Janet Werker habituated infants to a phoneme and found that infants aged 6-8 months turned their head to a change, 12 month olds did not

Acquisition

Acquisition

Theories

Prespeech
Period

Stages

Adult Rules
of Grammar

- 0-2 months: only crying
- 1-2 months: cooing
 - Ex. blowing bubbles, “ooo”
- 6-7 months: babbling
 - Mixing consonants and vowels, ex. “mama”, “dada”
 - Sounds and rhythm reflect their native language
 - Take turns in conversation
- 1 year: first words
 - Soft vowel, ex. “father”
 - **Protowords**: unique string of phonemes an infant invents and uses as a word
- 18-20 months: two-word stage
 - **Vocabulary spurt**: time of great word learning and naming
 - **Telegraphic speech**: only important parts of message are spoken
- 5-6 years: full grammatical sentences
 - Know more than 10,000 words

Acquisition

Acquisition

Theories

Prespeech
Period

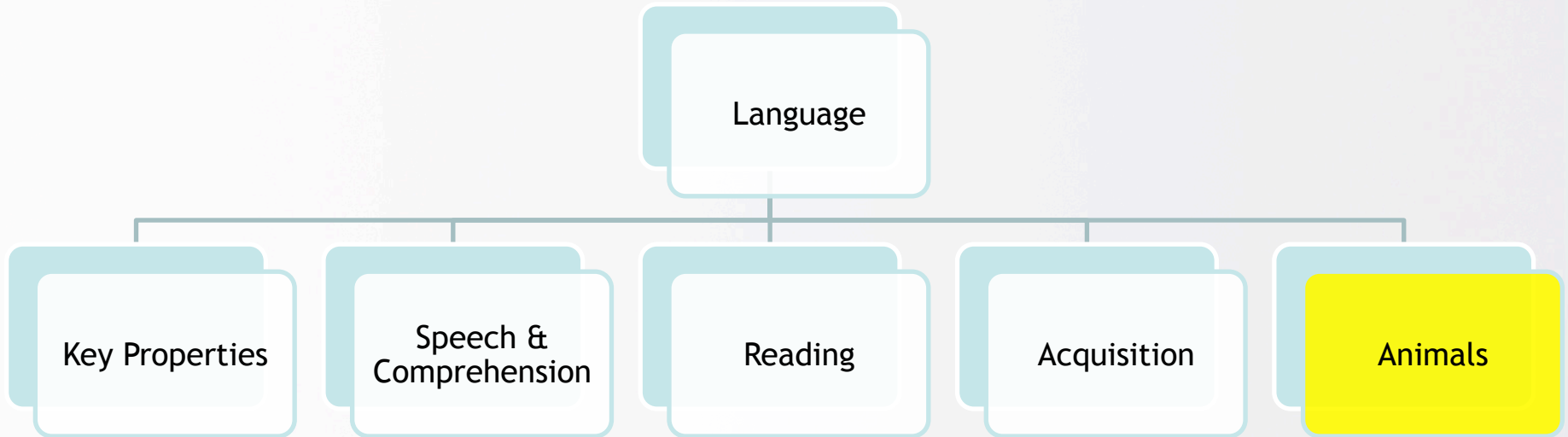
Stages

Adult Rules
of Grammar

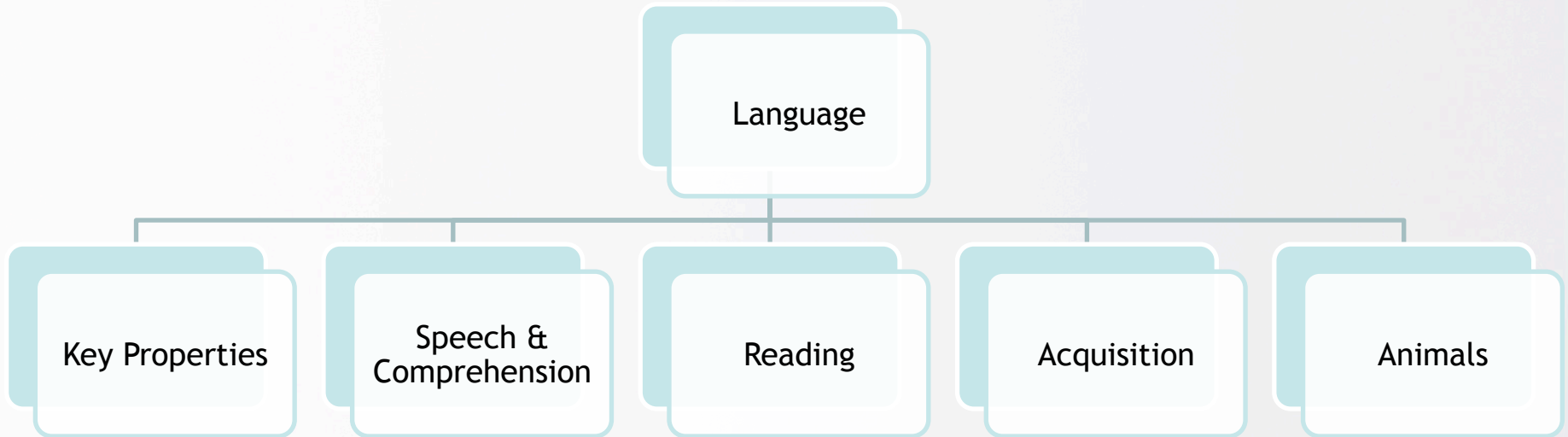


Adult Rules of Grammar

- Two-word sentences become complex using:
 - Function words (ex. “the”, “to”, “and”, etc.)
 - **Inflections:** suffixes we add to words to change their function
 - Ex. “-ed” makes most words past tense
- **Overgeneralization effects:** produce incorrect words based on other rules
 - Many verbs are irregular, ex. “I fell down”, NOT “I falled down”
- **Overextension:** use a word to denote a larger class of items than appropriate
 - Ex. After learning the word “ball” for toys, calling an orange a “ball”
- **Underextension:** use a word to denote a smaller class of items than appropriate
 - Ex. Calling only your family pet “dog” and not other dogs you see



- Washoe was a chimpanzee who learned 250 American Sign Language signs
- Kanzi was a chimpanzee trained to respond to spoken language by pressing symbols on a screen to make sounds, so he had a greater understanding of language
- Songs of songbirds are similar to the human language
 - Songs are complex and highly structured
 - Baby birds produce subsongs, similar to babbling
 - There is a critical period
 - Different dialects
- Alex was an African grey parrot who learned about 150 words and could answer questions





Practice MC Question

During language acquisition, infants become _____.

- a) Less sensitive to speech sounds in languages other than their own
- b) Better able to pay attention to differences in speech sounds of foreign languages
- c) Less able to pay attention to speech sounds in their own language
- d) More sensitive to speech sounds of languages other than their own

Answer: a)



Practice MC Question

After learning the word “daddy” to refer to her father, Suzie calls every adult man she sees “daddy”. This is an example of:

- a) Underextension
- b) Overextension
- c) Overgeneralization
- d) Semantics

Answer: b)



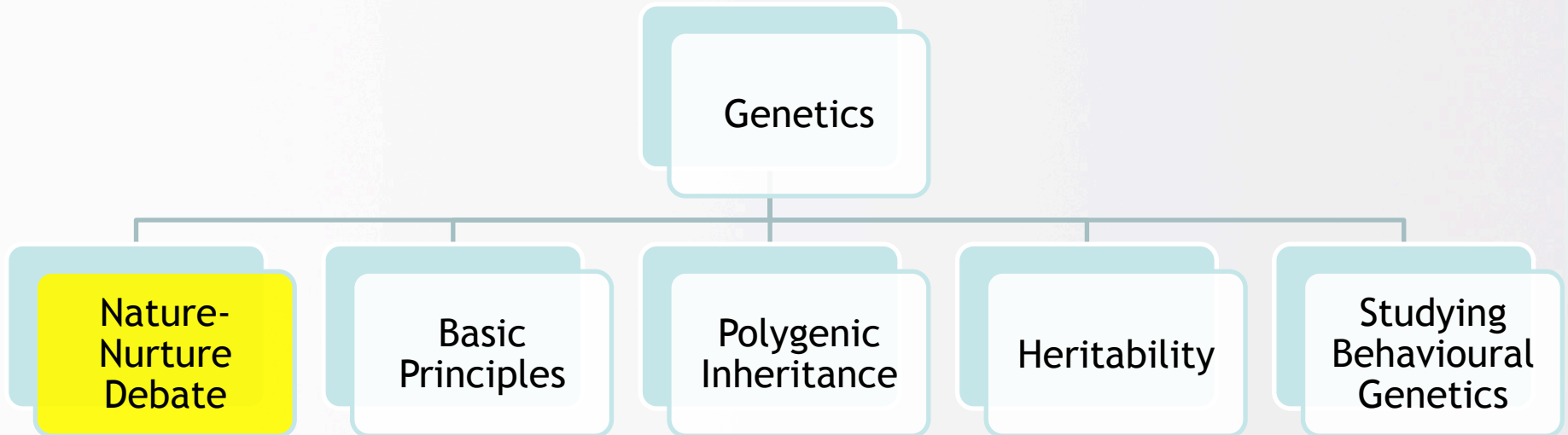
Practice Short Answer Question

Discuss the nativist theory of language acquisition and evidence that supports this theory.

- Chomsky's language acquisition device (LAD)
 - Contains rules for a universal grammar
 - Causes children to make hypotheses when speaking
 - Reinforcement is unnecessary because children want to speak
- Evidence:
 - Humans are the only species capable of complex language
 - Critical periods: children must be exposed to language within the first years of life for language development to occur normally
 - Example: Genie was found after 13 years of isolation and she could not develop language

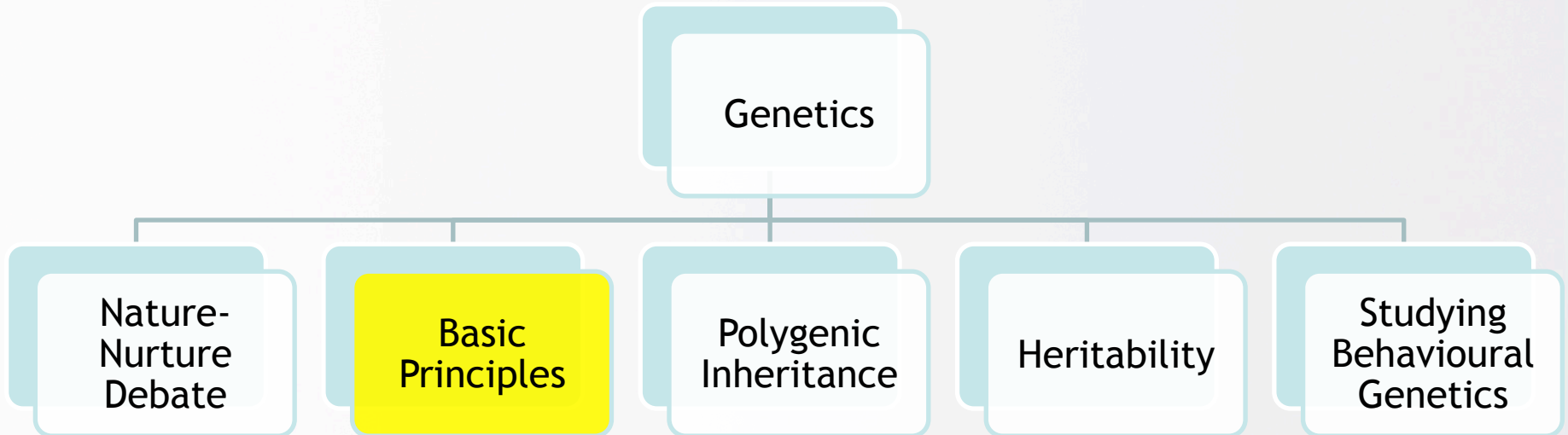


Genetics



Nature-Nurture Debate

- There are two views on the origin of behaviour:
 1. **Nativism:** we are born with behaviour
 2. **Empiricism:** behaviour comes from experience as we interact with the environment
- Behaviour does not come only from our genes (nature) or our environment (nurture)
 - Gene expression is affected by the environment, so behaviour comes from both nature and nurture



- **DNA (deoxyribonucleic acid):** strands of sugar and phosphate connected by nucleotide bases (adenine, thymine, guanine, cytosine)
 - Looks like a twisted ladder
- **Gene:** sequence of nucleotide bases along DNA
 - Contain instructions for proteins that affect behaviour
 - No explicit genes for behaviour



Basic Principles

- **Chromosomes** are threadlike structures of DNA
 - Genes are located on chromosomes
 - The point where the gene is located is the **locus**
 - We inherit 23 chromosomes from each parent
 - Total of 23 pairs of chromosomes
- **Sex chromosomes:** 1 pair of chromosomes that contain instructions for gender characteristics
 - Females have two X chromosomes, males have one X and one Y chromosome
- **Autosomes** are chromosomes that are not sex chromosomes

Basic Principles

- **Alleles** are the alternative forms of genes
- **Homozygous:** 2 of the same alleles on both chromosomes of the pair
 - **Recessive traits** occur only when the individual is homozygous for that trait
 - Ex. Blue eyes is a recessive trait, so you need to have two blue alleles for your eye colour to be blue
- **Heterozygous:** 2 different alleles on both chromosomes of the pair
 - **Dominant traits** are shown when the individual is heterozygous for that trait
 - Ex. Brown eyes is a dominant trait, so if you have a blue and brown allele for eye colour, your eye colour will be brown

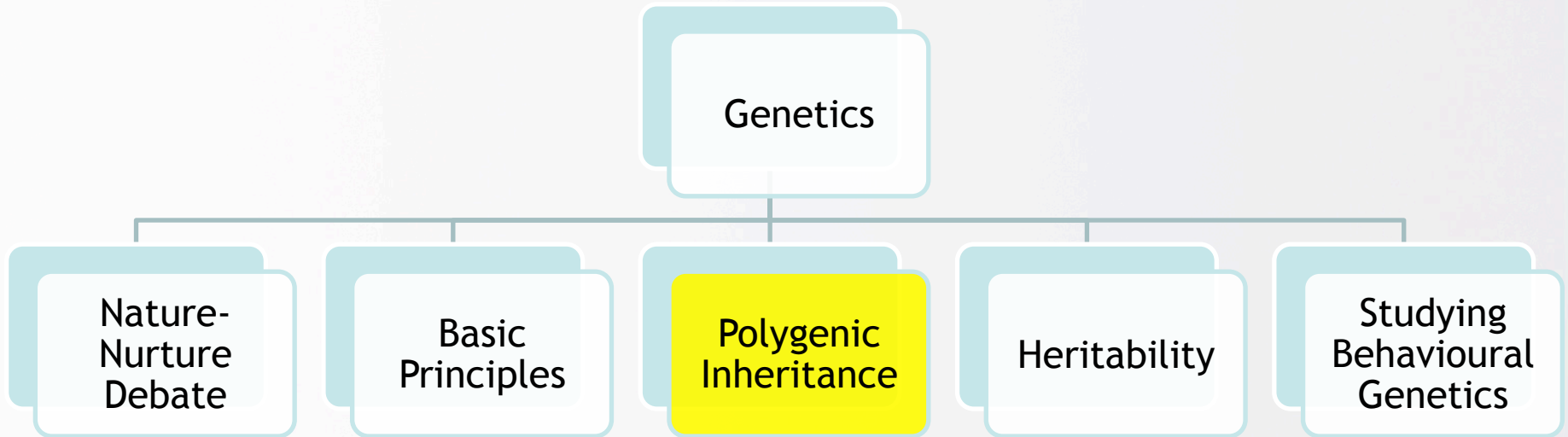
Basic Principles

- **Genotype:** genetic makeup of a trait
- **Phenotype:** how the trait is expressed

Example: B = allele for brown eyes (dominant)

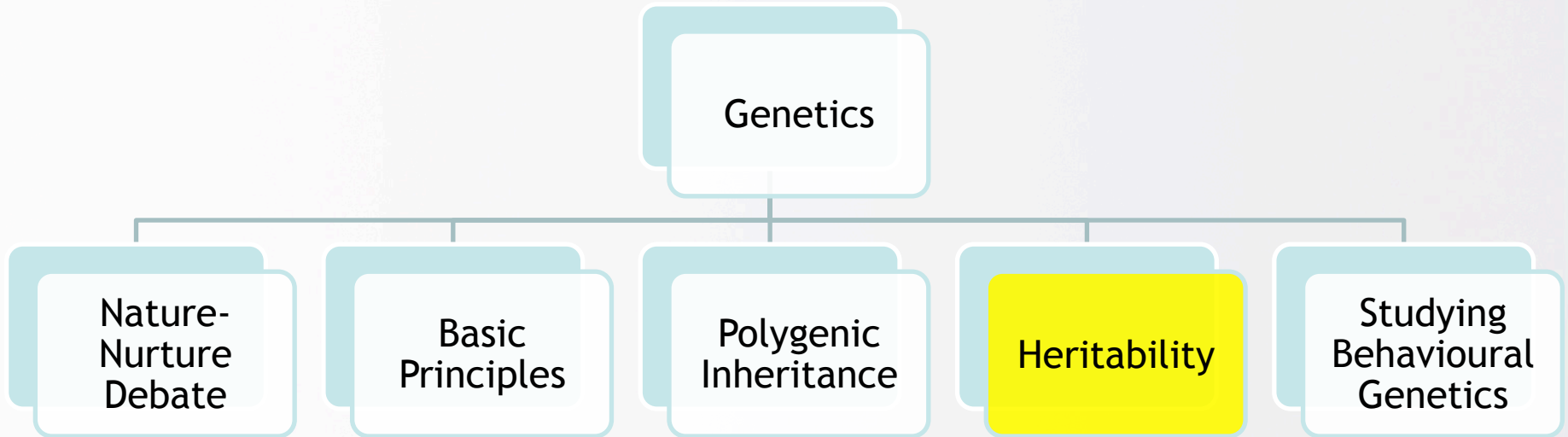
b = allele for blue eyes (recessive)

BB and Bb have brown eyes - same phenotype but different genotype



Polygenic Inheritance

- Some behaviours are inherited based on many genes
- Causes a continuum of behaviour
- Studied by using identical and fraternal twins:
 - Identical (monozygotic) twins come from the same egg -have identical genotypes
 - Fraternal (dizygotic) twins come from different eggs - no more similar than any other siblings
- **Concordance research** studies the similarity of traits between twins
 - Twins are concordant for a trait if both express or do not express it
 - Twins are discordant for a trait if only one expresses it
 - If concordance rates for identical twins are higher than those for fraternal twins, the trait is influenced by genetics



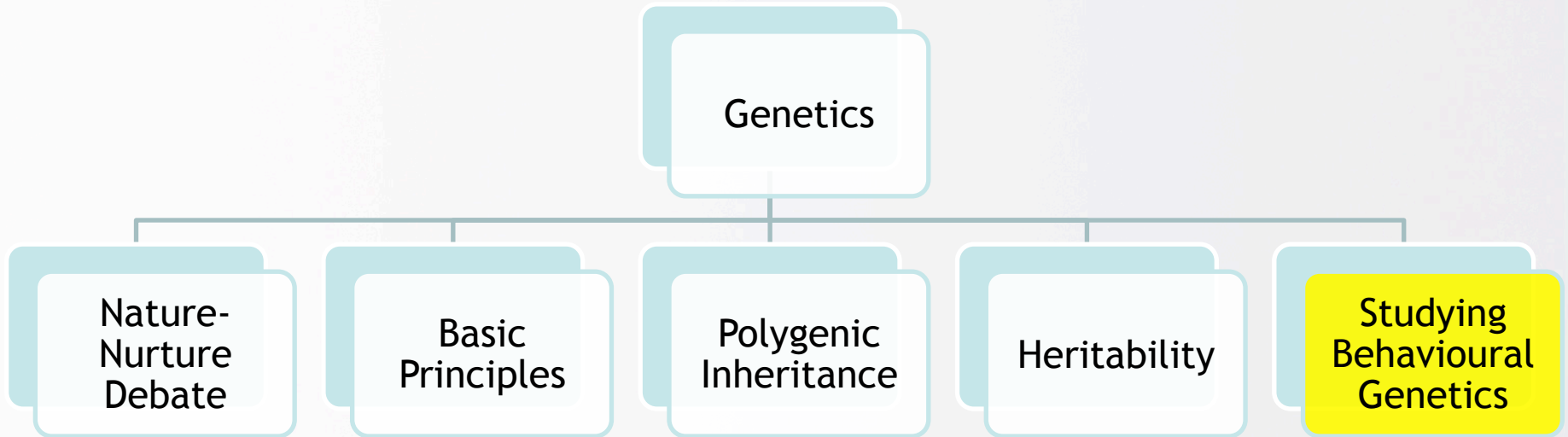
Heritability

- Genetic influence is measured by heritability (h^2)
 - Ex. If you were all reared in identical environments, your differences would be due to genetics. If you all came from the same egg but were raised in different environments, your differences would be due to the environment
- **Heritability:** the estimated amount of variability in a trait (in a given population at a given time) due to genetic factors
 - The more a trait is influenced by genetic factors, the greater its heritability

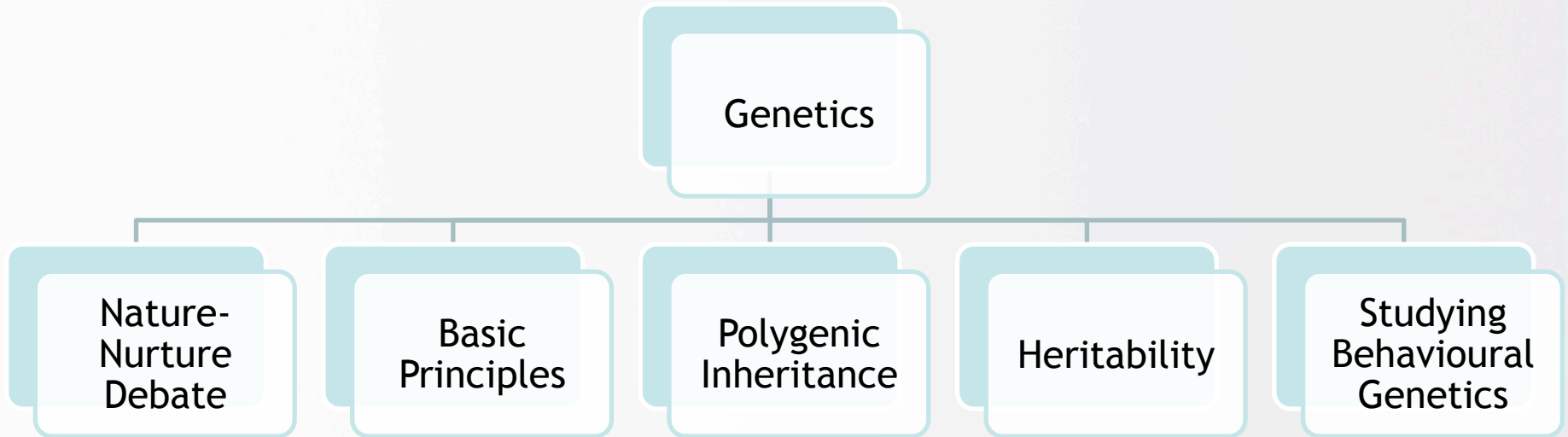
Heritability

Heritability estimates may not generalize to other populations or groups (socially dependent).

- A small isolated population has higher heritability
- Example:
 - A place like Iceland, which has a small population and is relatively isolated, has a population with less genetic variability. So, we expect it to have higher heritability estimates than a population in a more heterogeneous environment, like Toronto.



- **Mendelian traits** show dominant or recessive patterns of inheritance
- **Non-Mendelian traits** are usually polygenic and show continuous variation in the phenotype
- **Artificial Selection**
 - Any heritable trait can be selected in breeding
 - Tyron reared and selected two groups of rats: “maze-bright” and “maze-dull”
 - Mated “bright” with “bright” and vice versa
 - Parenting made little difference
 - Maze learning could be manipulated through artificial selection
 - Changing environmental conditions reduced the effects of genetic differences between “bright” and “dull” rats, and both groups performed well in stimulating conditions





Practice MC Question

Heritability is a term used to refer to:

- a) The amount of variability in a trait in a given population due to genetic factors
- b) Heredity
- c) The probability due to genetic factors
- d) Inheritance

Answer: a)



Practice MC Question

Which of the following is NOT true regarding polygenic inheritance:

- a) Causes a continuum of traits
- b) An example is intelligence
- c) It causes all-or-nothing traits
- d) Studied using identical and fraternal twins

Answer: c)



Practice Short Answer Question

What role do twins play when studying polygenic inheritance?

- Identical twins come from the same egg and have identical genotypes
- Fraternal twins come from different eggs and have different genotypes (like siblings)

Concordance research studies the degree of similarity in traits expressed between twins

- Twins are concordant if both express a trait or do not express it
- Twins are discordant if only one expresses a trait
- If concordance rates for identical twins are much higher than those for fraternal twins, the trait is strongly influenced by genetics



Intelligence

Intelligence

- **Intelligence** is a person's ability to:
 - Learn and remember information
 - Recognize concepts and their relations
 - Apply information to their own behaviour

- Different cultures have different values and different definitions of intelligence

Intelligence

Theories

Intelligence
Testing

Roles of
Heredity and
Environment

Theories

Spearman's Two-Factor Theory

Information Processing Theory

Neuropsychological Theory



Spearman's Two-Factor Theory

- Performance on a test is determined by:
 - **G factor:** general factor, accounts for moderate correlations among different tests
 - **S factor:** factor specific to a particular test
- **Factor analysis:** identifies common factors around groups of tests
 - Ex. If a person scores high on a set of tests, these tests likely measure the same factor
 - g (common factor for general intelligence) comes from fact that all measures of intelligence are positively correlated



Spearman's Two-Factor Theory

- Cattell performed second-order factor analysis and found two major factors:
 - **g_f = fluid intelligence**
 - defined by culture-free tasks, such as the ability to see relations among objects
 - potential ability to learn and solve problems
 - **g_c = crystallized intelligence**
 - defined by culture-dependent information, such as vocabulary and information learned in schools
 - what a person has accomplished with fluid intelligence

Theories

Spearman's Two-Factor Theory

Information Processing Theory

Neuropsychological Theory

- Sternberg's triarchic theory of intelligence:
 - **Analytic intelligence:** mental mechanisms people use to plan and perform tasks; 3 components:
 - **Metacomponents:** decide the nature of the problem, select a strategy and choose resources
 - **Performance components:** processes used to perform tasks
 - **Knowledge and acquisition components:** person gains new knowledge by combining relevant information with what he already knows
 - **Creative intelligence:** ability to deal with new situations and solve problems automatically
 - **Practical intelligence:** reflects behaviours subject to natural selection in 3 forms:
 - **Adaptation:** fitting into the environment
 - **Selection:** finding a good match between oneself and the environment
 - **Shaping:** a person changes his environment to better suit his abilities when adaptation and selection do not work



Information Processing Theory

- Three aspects contribute to successful intelligence, which is the ability to:
 - Analyze one's strengths and weaknesses
 - Use the strengths to the greatest advantage
 - Minimize the impact of weaknesses by compensating for them

Theories

Spearman's Two-Factor Theory

Information Processing Theory

Neuropsychological Theory



Neuropsychological Theory

Theory of multiple intelligences rejects the idea of a single or a few primary types of intelligence

- Intelligence depends on culture; it may or may not be activated depending on the extent to which the culture values it
- Each intelligence is the result of evolution, and has biological isolation
 - Ex. Brain damage affecting musical intelligence spares interpersonal intelligence
- 8 distinct intelligences
- Recognizes intelligences in different cultures

Intelligence

Theories

Intelligence
Testing

Roles of
Hereditiy and
Environment

Intelligence Testing

Intelligence
Testing

Galton

Tests

Reliability
& Validity

- He noticed brilliant people often had brilliant relatives - suggested intelligence was heritable
- Intelligence must be related to other biologically based phenomena
 - Looked at head size, ability to perform sensory discriminations and neural quickness
- Defined **correlation**: the degree to which variability in one measure is related to variability in another

Intelligence Testing

Intelligence
Testing

Galton

Tests

Reliability
& Validity

Tests

Binet-
Simon

Stanford-
Binet

Wechsler

Binet-Simon

- Binet disagreed with Galton: simple sensory tests could not determine intelligence
 - Measurements of psychological ability were better
- Simon and Binet published the Binet-Simon Scale for the French government to look into children with learning difficulties
 - Obtained norms (average scores for children of various ages) for each test
- Binet revised the test to assess both children with and without learning disabilities
 - Provided an estimate for **mental age**: the level of intelligence expected for an average child of a particular age
 - Ex. If an 8 year old scores as well as the average 10 year old, he has the mental age of a 10 year old

Tests

Binet-
Simon

Stanford-
Binet

Wechsler



Stanford-Binet

- Contained a formula for computing **intelligence quotient (IQ)**
 - **Ratio IQ** = mental age/chronological age x 100
 - If mental age is equal to chronological age, intelligence is average
 - Chronological age continues to increase, while mental age eventually stops increasing
- **Deviation IQ** makes the IQ score relative to one's age group
 - A score of 100 describes the average score
 - Scores are distributed on a normal curve, so one standard deviation away from mean equals 15 points

Tests

Binet-
Simon

Stanford-
Binet

Wechsler

- Intelligence was made up of multiple abilities
- His test is divided into two major categories (verbal and performance) which are then divided into subscales
- Developed Wechsler Adult Intelligence Scale (WAIS) and Wechsler Intelligence Scale for Children (WISC)

Intelligence Testing

Intelligence
Testing

Galton

Tests

Reliability
& Validity

Reliability & Validity

- **Reliability:** ensure scores are consistent
- **Validity:** ensure test measures what it was intended to measure
 - Assessed by the strength of the correlation between the test score and the criterion
 - Ex. Criterion for intelligence could be marks in school
- **Problem of bias:** results of some tests are affected by what people have learned (cultural influence)
- **Problem of self-fulfilling prophecies:** a person's expectations about what will happen leads them to perform in a specific way
 - Ex. A parent who knows their child performs poorly will encourage him to pursue non-academic goals

Intelligence

Theories

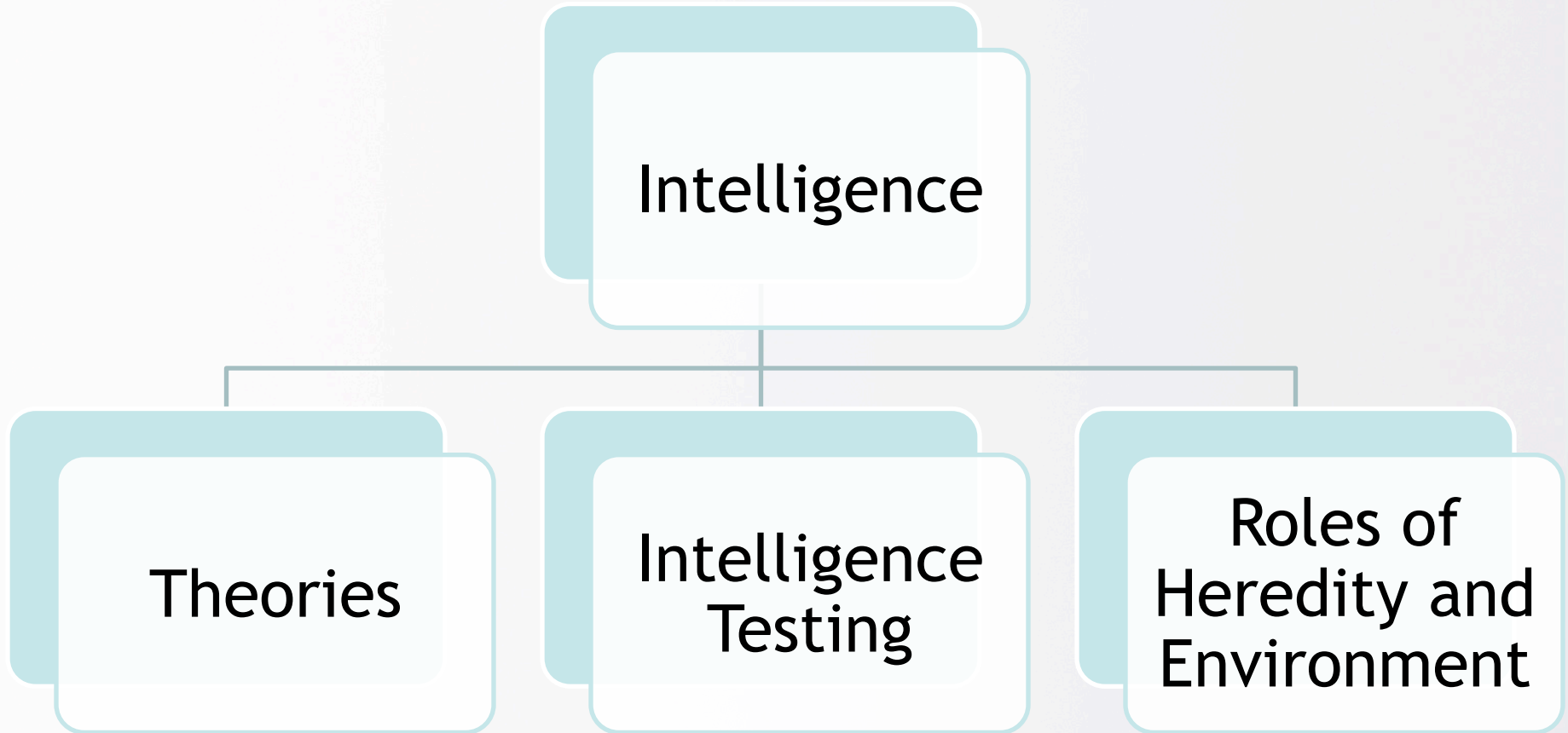
Intelligence
Testing

Roles of
Heredity and
Environment



Roles of Heredity and Environment

- We inherit genes that influence the development of intelligence, we do not inherit a number of IQ points
- Heritability estimate for intelligence is 0.5
 - This means genetic differences are responsible for 50% of differences in IQ in a population
- Heritability of IQ increases with age
- Environment plays an important role in intelligence
 - Children have their environments chosen for them but once they're older, they seek out their own environments
- **Flynn effect:** a worldwide rise in intelligence with an increase of about 3-4 IQ points a decade
 - Possibly due to more complex cultures and better nutrition





Practice MC Question

Jane took an IQ test two years ago and scored 126. She took the same IQ test a week ago and scored 128. This IQ test has a high degree of:

- a) Reliability
- b) Accuracy
- c) Generality
- d) Validity

Answer: a)



Practice MC Question

The Stanford-Binet scale states that:

- a) Ratio IQ = chronological age/mental age
- b) If mental age is equal to chronological age, the child's intelligence is average
- c) Chronological and mental age continue to increase
- d) The standard deviation of scores is 10 points

Answer: b)



Practice Short Answer Question

Explain Stanford and Binet's ratio IQ. What is the problem with using the ratio IQ and what type of IQ was created to deal with this problem?

- Ratio IQ = mental age/chronological age x 100
 - Mental age = level of intelligence expected for the average child of a certain age
 - Chronological age = the actual age of the child
 - Score of 100 is average
- Problem: a person's chronological age continues to increase, while mental age begins to level off
- Deviation IQ accounts for this problem
 - Deviation IQ is a score relative to one's age group
 - Calculate how many standard deviations a person's score is away from the average (100) - one standard deviation equals 15 points

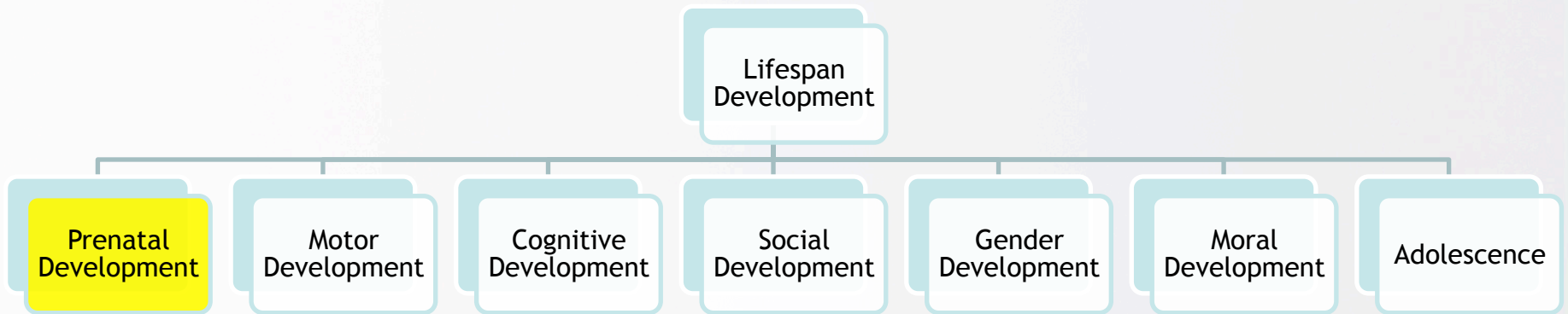


Lifespan Development

Lifespan Development



Lifespan Development



Prenatal Development

Prenatal
Development

Germinal
Period

Embryonic
Period

Fetal Stage



1. Germinal/Zygote Period

- Begins with **conception** (sperm unites with an ovum to produce a zygote)
- **Gametes** (ex. sperm, ovum) are **haploid** (half the normal number of chromosomes)
- Zygotes are **diploid**
- Lasts about 8-10 days
- Ends when cells attach to the uterine wall
- Zygotic cell divides through **cleavage** process
 - The mass is then called a **morula**
 - Sometimes splits to form identical twins



1. Germinal/Zygote Period

- We have different cells because of **epigenetic modification** (some genes are turned on, while others are turned off)
- **Stem cells** have not undergone epigenetic modification
- Two layers of cells form the:
 - **Inner cell mass**: becomes the embryo
 - **Trophoblast**: protects and nourishes the inner cell mass
- The morula is called a **blastocyst** after the two different layers have formed

Prenatal Development

Prenatal
Development

Germinal
Period

Embryonic
Period

Fetal Stage

2. Embryonic Period

- Begins once blastocyst has implanted in the uterine wall (about 2 weeks after conception) and lasts until about 8 weeks after conception
- Trophoblast layer becomes:
 - **Amniotic sac:** provides an environment for the embryo
 - **Placenta:** acts as a filter/barrier
 - Prevents transfer of harmful chemicals and blood mixing
 - Transfers nutrients from mother to embryo and waste from embryo to mother
- Embryo separates into 3 layers:
 1. **Endoderm:** inner layer, becomes digestive system, urinary tract and lungs
 2. **Mesoderm:** middle layer, becomes muscles, bones and circulatory system
 3. **Ectoderm:** outer layer, becomes skin, hair, teeth and CNS



2. Embryonic Period

- The neural tube forms shortly after, develops into the brain and spinal cord
 - **Neurogenesis:** growth of new neurons
- **Neural migration:** neurons move and organize themselves
- Heart begins to beat
- Most of major body structures begin to form and are distinguishable
- Most susceptible to **teratogens** (substances or events that can cause birth defects)

2. Embryonic Period

- Alcohol is one of the most common teratogens
 - Can cross the placenta and affect the fetus
 - Responsible for Fetal Alcohol Spectrum Disorder (FASD)
 - Most common known cause of mental retardation
 - Amount of alcohol that will cause this depends on timing, genetics, and consumption frequency
- Cigarettes
 - Nicotine causes abnormal placenta development
 - Reduces oxygen supply to fetus
 - Increases risk for SIDS, lower IQ, premature birth and behavioural problems
- Prescription drugs - Thalidomide
 - Prevents nausea but causes babies to be born with missing or stunted limbs
- Diseases - Rubella



2. Embryonic Period

- Sexual development begins
 - Develops a pair of gonads that become ovaries or testes
- Development proceeds in 2 patterns:
 - Cephalocaudal: head to toe
 - Proximodistal: inside to outside
- **Apoptosis** is programmed cell death
 - Ex. The cells in the webbing between fingers die

Prenatal Development

Prenatal
Development

Germinal
Period

Embryonic
Period

Fetal Stage

3. Fetal Stage

- From the 9th week after conception to birth
- Organ growth is completed
- 10 weeks: begin breathing-like motions
- 4th month: sleep and wake patterns
 - Movements can be felt by the mother
- 5th month: fetus responds to sounds (especially mother's voice)
- 6th month: fetus can live if born
 - Decrease in spontaneous movement of fetus
- 7th month: fetus begins to put on weight rapidly until birth
- 9th month: fetus is born
 - Exact time of birth is influenced by mother's emotional state, stress level and nutrition

Prenatal Development

Prenatal
Development

Germinal
Period

Embryonic
Period

Fetal Stage



Practice MC Question

One of the negative side effects of a woman smoking during pregnancy is that the fetus may be _____.

- a) Born with a cleft palate
- b) Born prematurely
- c) Born severely mentally retarded
- d) Born with a limited respiration capacity

Answer: b)



Practice MC Question

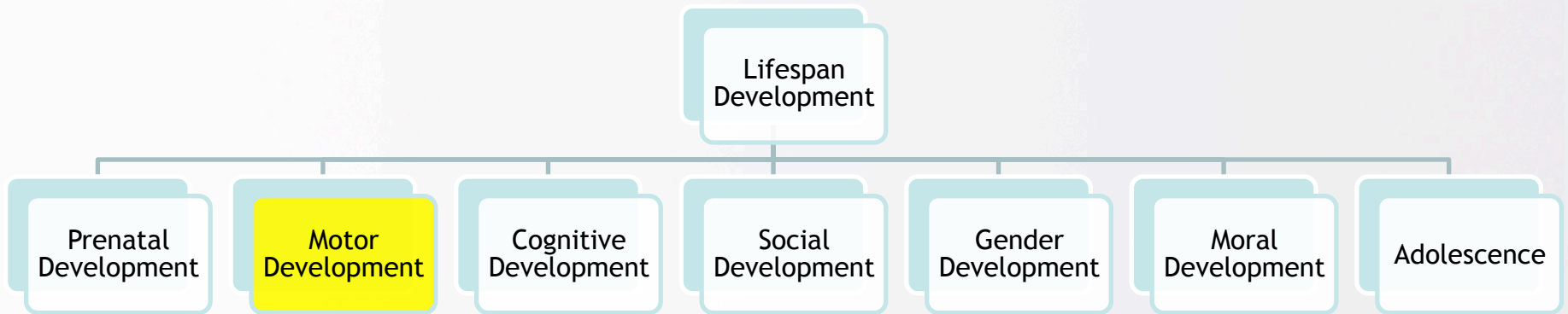
The embryonic period begins when _____

- a) The blastocyst implants itself in the uterine wall
- b) The blastocyst has left the fallopian tubes
- c) The trophoblast implants itself in the uterine wall
- d) The ectoderm, mesoderm and endoderm begin to form

Answer: a)



Lifespan Development



Motor Development

**Motor
Development**

Reflexes

**Motor
Milestones**

- **Reflexes** are automatic movements in response to specific stimuli
 - Some last throughout life
 - Eye blink reflex - closing eyes in response to a bright light
 - Some disappear shortly after birth
 - Rooting reflex - when something touches an infant's cheek, turn their head in the direction of touch and open mouth
 - Sucking reflex - infant sucks when something is put in mouth
 - Babinski reflex - infant fans toes out and curls them back in when the bottom of foot is stroked
 - Moro reflex - infants throw out arms and grasp if they feel themselves dropping
 - Stepping reflex - infants produce walking movements if held over a flat surface

- Reaching/grasping reflex
 - Birth to 3 months: infants grasp anything that touches their palms
 - **Pre-reaching:** poorly guided arm movements towards an interesting object
 - 3 months: grasping reflex replaced by intentional grasping
 - 7 months: smooth and accurate reaches towards an object
 - Understand reaching is goal-oriented

Motor Development

**Motor
Development**

Reflexes

**Motor
Milestones**

Motor Milestones

- Begins with fetal movements
- Stages:
 - 5 to 7.5 months: sit up unsupported
 - 9 months: pull themselves up, stand with support
 - 10 months: walk with support
 - 12 to 13 months: walk unsupported
 - 16 months: walk backwards, walk with toys
 - 2 years: run, kick, eat with utensils
- Much variability among North American children and children in different cultures
 - Ex. Mothers of Ache tribe carry children for first three years, so these children begin walking later

Motor Development

**Motor
Development**

Reflexes

**Motor
Milestones**



Practice MC Question

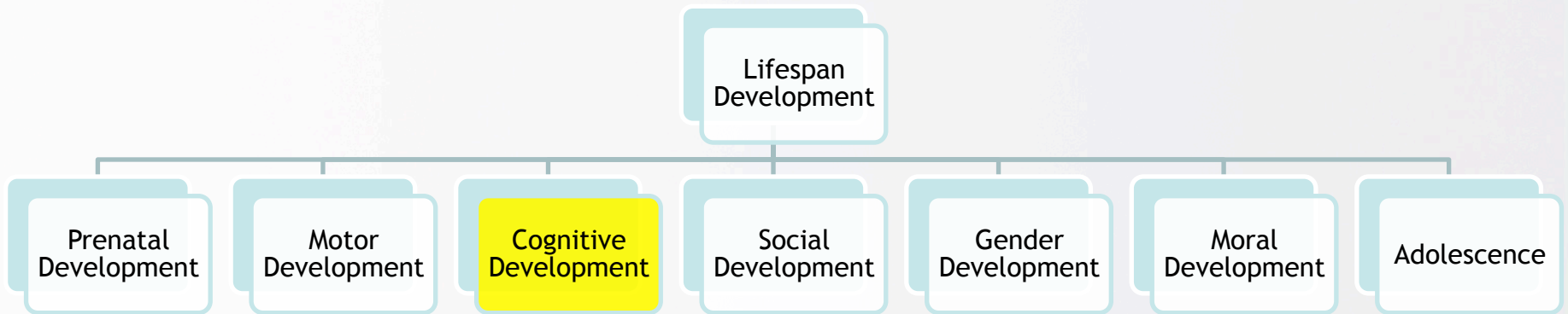
The Moro reflex, which disappears shortly after birth, can be seen when an infant:

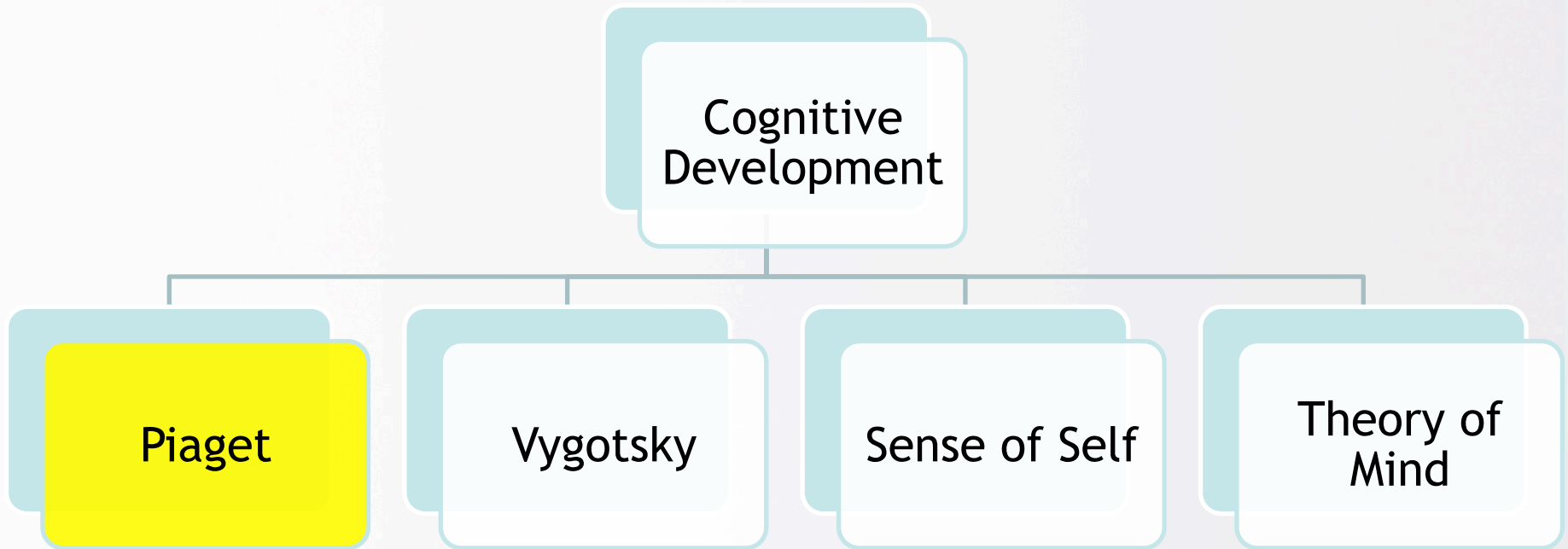
- a) Fans his toes out and then curls them back in when the sole of his foot is stroked
- b) Throws out his arms and then makes a grasping motion
- c) Turns in the direction of something that touches his cheek and opens his mouth
- d) Produces walking motions when held over a flat surface

Answer: b)



Lifespan Development





Piaget

**Mechanisms
of Change**

Stages

Limitations

Mechanisms of Change

- Noticed children engaged in behaviours distinct to their age and made similar mistakes in problem solving
 - There must be a sequence of learning all children follow
- **Schema:** framework that organizes information about a person, place or thing
- **Assimilation:** new information is incorporated into an existing schema
 - Eg. Boy has a schema for what adults and children are like - adults are tall and drive cars, children are short and ride bikes
 - Almost every child and adult he meets will usually fit into these schemata



Mechanisms of Change

- **Accommodation:** existing schema are changed by new experiences
 - Ex. Boy's schema for adults will have to change when he meets a very short adult as it will have to include the possibility that some adults are short
- **Equilibration:** schemas are reorganized
 - When assimilation and accommodation fail
 - Ex. Boy's schema for adults and children would eventually be reorganized after meeting many short adults, many very tall children, adults who ride bikes and teenagers who drive cars

Piaget

Mechanisms
of Change

Stages

Limitations

1. Sensorimotor Period

- Approximately first two years of life
- Understanding the environment through sensory and motor abilities
- Reflexes become complex behaviour
- **Object permanence** (occurs at 8 months) is the realization that objects still exist when out of sight
- **A-not-B error** occurs when the object is hidden from the baby in location A, then visibly moved to location B, but the infant will still look in location A (between 8 months and 1 year)

2. Preoperational period

- Ages 2 to 7
- Think logically and symbolically
- Rapid development of language and symbolic representation
- **Egocentrism:** belief that others see the world the same way they do
 - Ex. Child covers his eyes when hiding during a game of hide and seek and they believe you cannot see them because they cannot see you
- **Problem of conservation:** understanding a transformed object still has the same properties

3. Period of concrete operations

- Ages 7 to 11
- Understand conservation problems
- Empathize with attitudes and feelings of others
- Understand cause-and-effect relationships

4. Period of formal operations

- Age 11 to adulthood
- Abstract reasoning
- Formulate and test hypotheses
- Not everyone reaches this stage
- Some adults only show this thinking in their area of expertise

Piaget

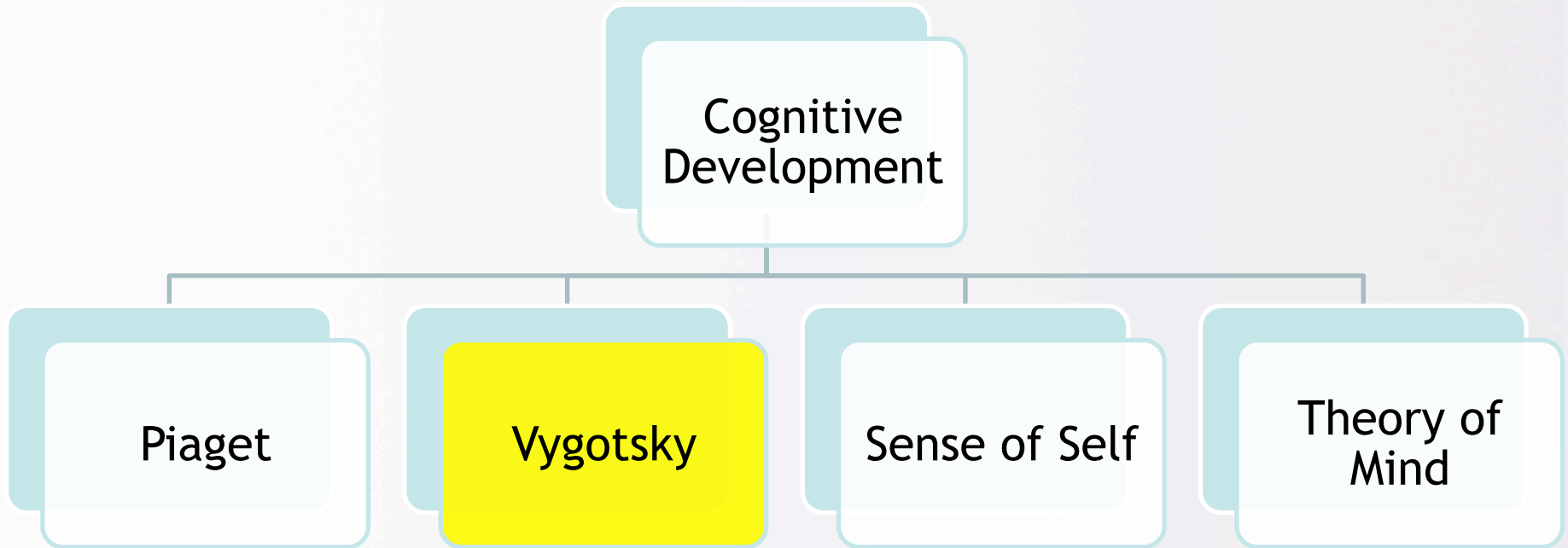
Mechanisms
of Change

Stages

Limitations

Limitations

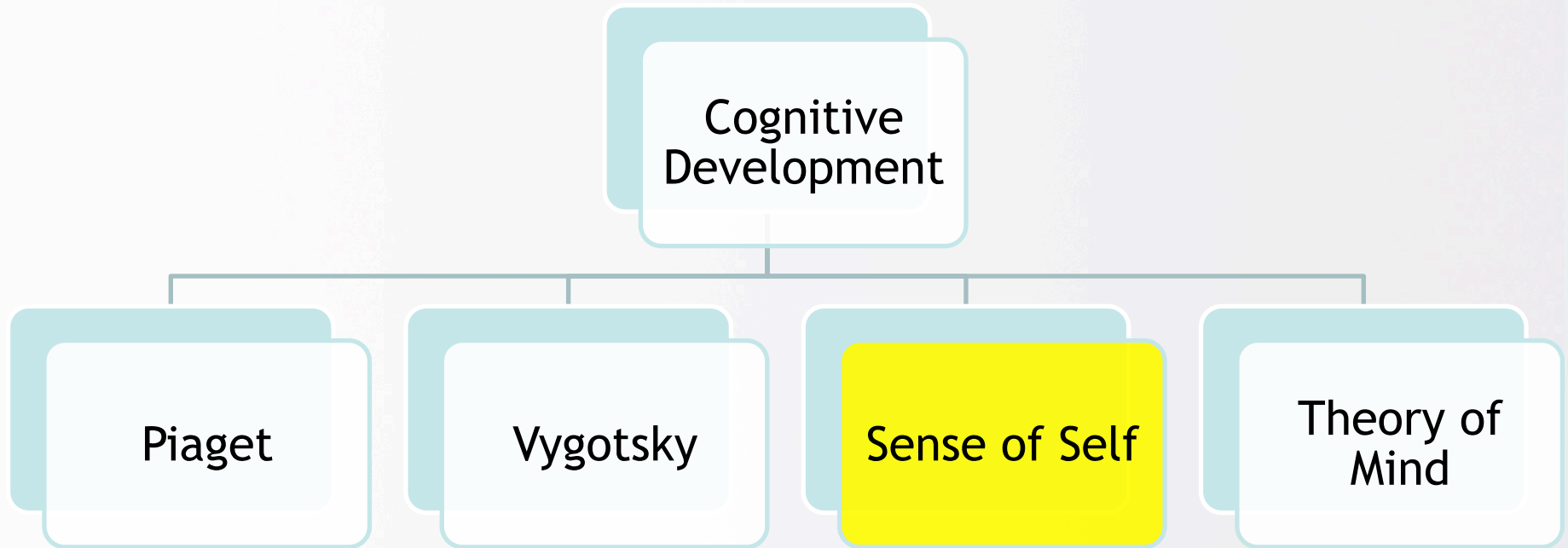
- Does not account for developmental variability
- Underestimated the ability of young children to understand another person's point of view
 - Children are less egocentric at earlier ages



- Agreed with Piaget that experience with the physical world is important
- Culture plays a big role in cognitive development
 - How children see and hear other people interact with the world influences them
- Use of speech influences cognitive development
 - Child is developing a mental plan to guide behaviour when talking to himself
 - At age 7, talking aloud becomes “inner speech”, which represents internalization of words and thought
 - Piaget would view talking aloud to oneself as egocentric

- **Intersubjectivity:** understanding between two communicators that allows them to communicate effectively
 - Ex. If I ask you about the test we just wrote and you mention the last question being difficult, we understand we are talking about the same test
- **Joint attention:** people who are together focus on the same object in the environment
 - Ex. Mother and child focus on the same thing when doing a puzzle together
- **Social referencing:** people take cues from each other when dealing with unfamiliar circumstances
 - Ex. Infant looks to mother in a new situation

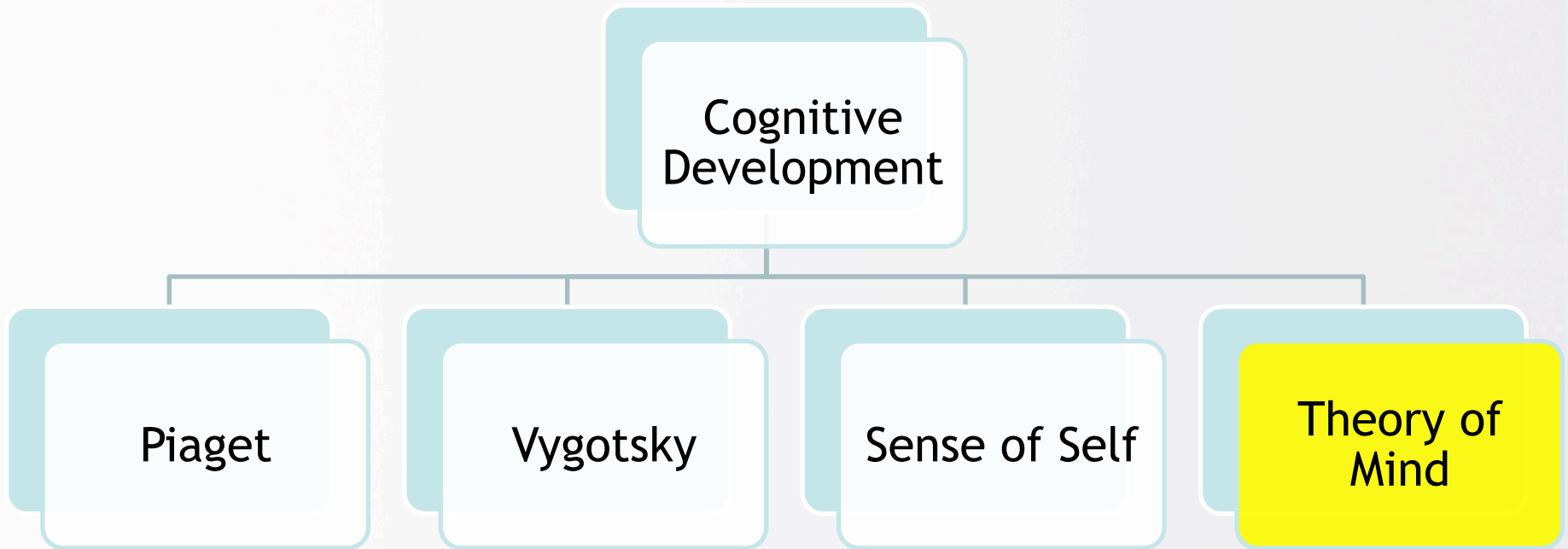
- **Social scaffolding:** people with more knowledge help a child reach a higher level of thought than they could have alone
 - Ex. Child knows how to add one-digit numbers, but encounters a problem with two-digit numbers, so father helps child by showing him how to carry numbers
- **Actual developmental level:** skills and abilities a child can show on his own
 - Piaget: this is the limit of the child's skill
 - Vygotsky: a skilled mentor could help a child achieve a higher level
- **Zone of proximal development:** difference between what child can do on his own and what he can do with help from a mentor
 - Tasks in ZPD eventually enter actual developmental level, and ZPD then includes more difficult problems
 - Ex. Actual developmental level is being able to add one-digit numbers; zone of proximal development is adding two-digits numbers by learning strategy of carrying numbers



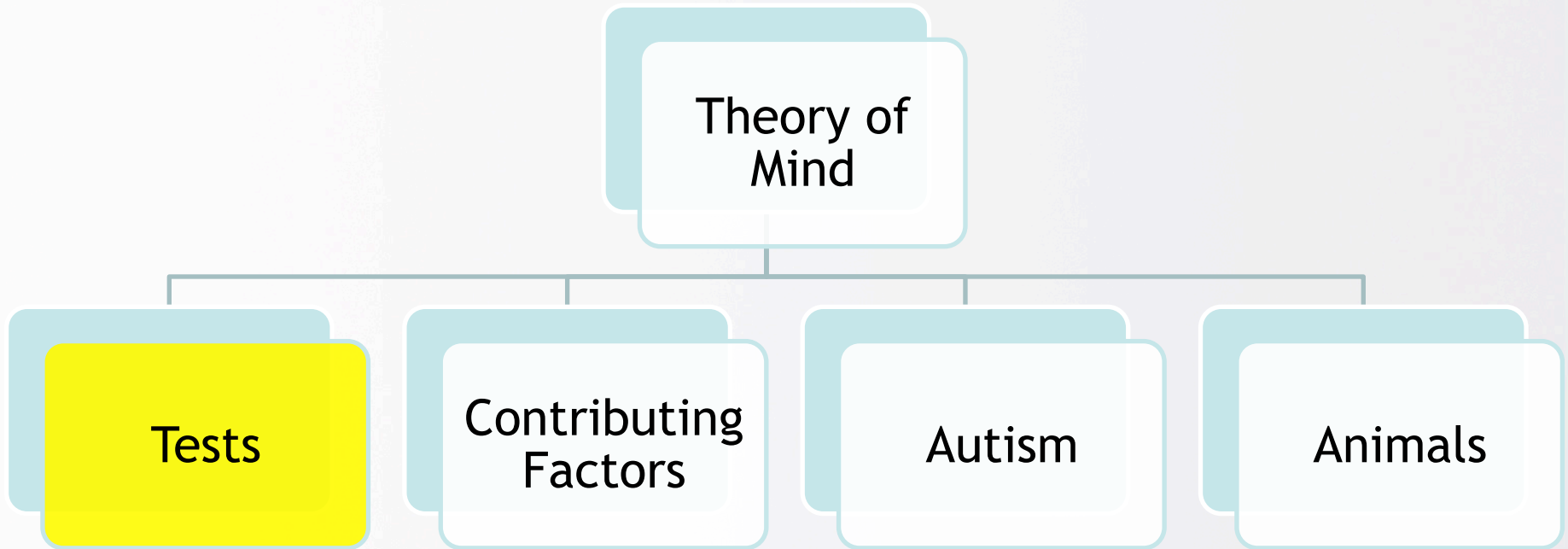
- **Rouge test:**

- Initially began with chimps:
 - Put a mirror in their cage and they eventually realized they were looking at themselves
 - Put a red dot on the chimps forehead and they began inspecting themselves
- At 15-24 months, babies can pass the rouge test
- At 30 months, children recognize photos of themselves

- Development of self-concept:
 - 2 years: refer to self verbally
 - 3 to 4 years: describe themselves in physical traits, preferences, relationships, abilities and feelings
 - Over-estimate their abilities
 - Ex. “I like trucks”, “I have a sister”, “I can run fast”
 - 8 years: factor memories into self descriptions, make social comparisons
 - Ex. “I am the fastest runner in my class”
 - Adolescence: experience conflict in their self concept
 - **Imaginary audience:** feel everyone else is constantly watching and evaluating them
 - Discrepancy in their behaviours and feelings in different places
 - Ex. Feel happy with friends, sad at home; are nice to their parents when alone, are rude to their parents in front of friends



Theory of Mind



- **Theory of mind:** ability to reason about what other people might know or believe, and how those beliefs and knowledge will relate to their actions
 - Age 3: children know something about themselves that is unknown to another person and they believe this other person knows this
 - Age 4: children develop theory of mind

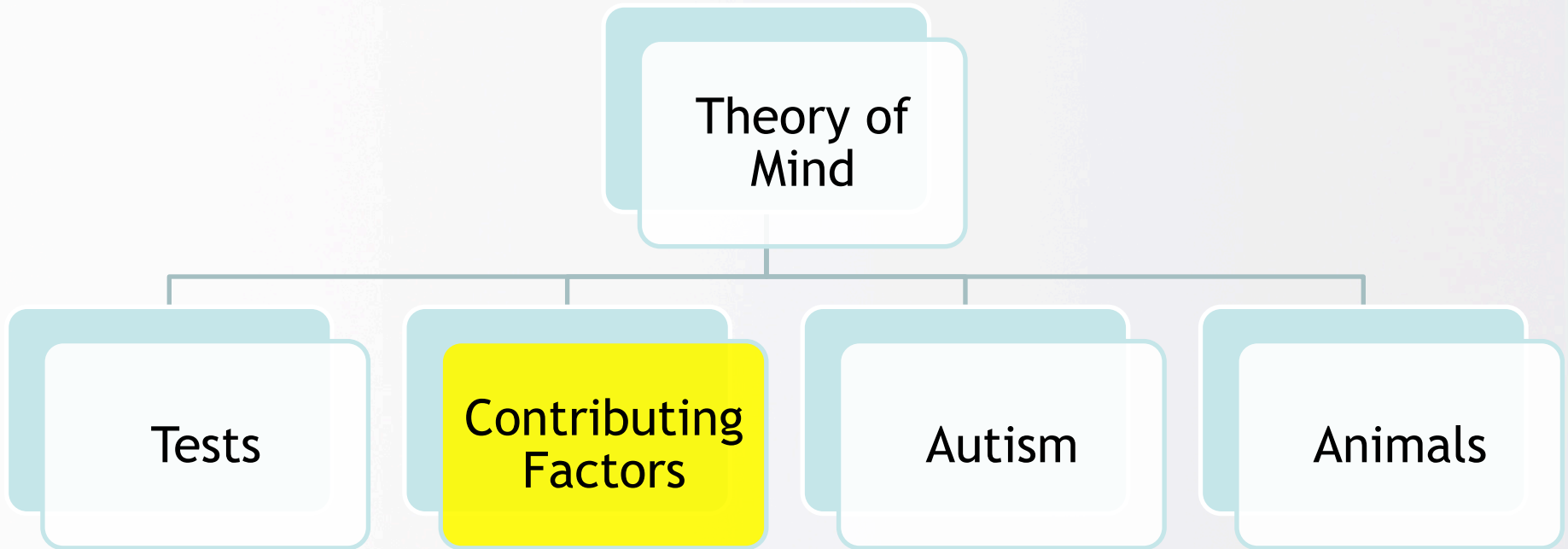
Researchers use false-belief problems to test theory of mind

- **Container test:**

- Researcher shows a box of Smarties to a child and asks what is in the box, child says Smarties
 - Researcher opens box and there are pencils
 - Researcher asks child what the next person will think is in the box
 - 3 year old says pencils
 - 4 year old says Smarties (theory of mind has developed)

- **Displacement test: (“Sally-Anne test”)**

- The Sally doll places a marble in a basket and leaves the room, Anne doll moves to marble to a box while Sally is gone
 - Sally doll returns and researcher asks the child where Sally will look for the marble
 - 3 year old says in the box
 - 4 year old says in the basket (theory of mind has developed)



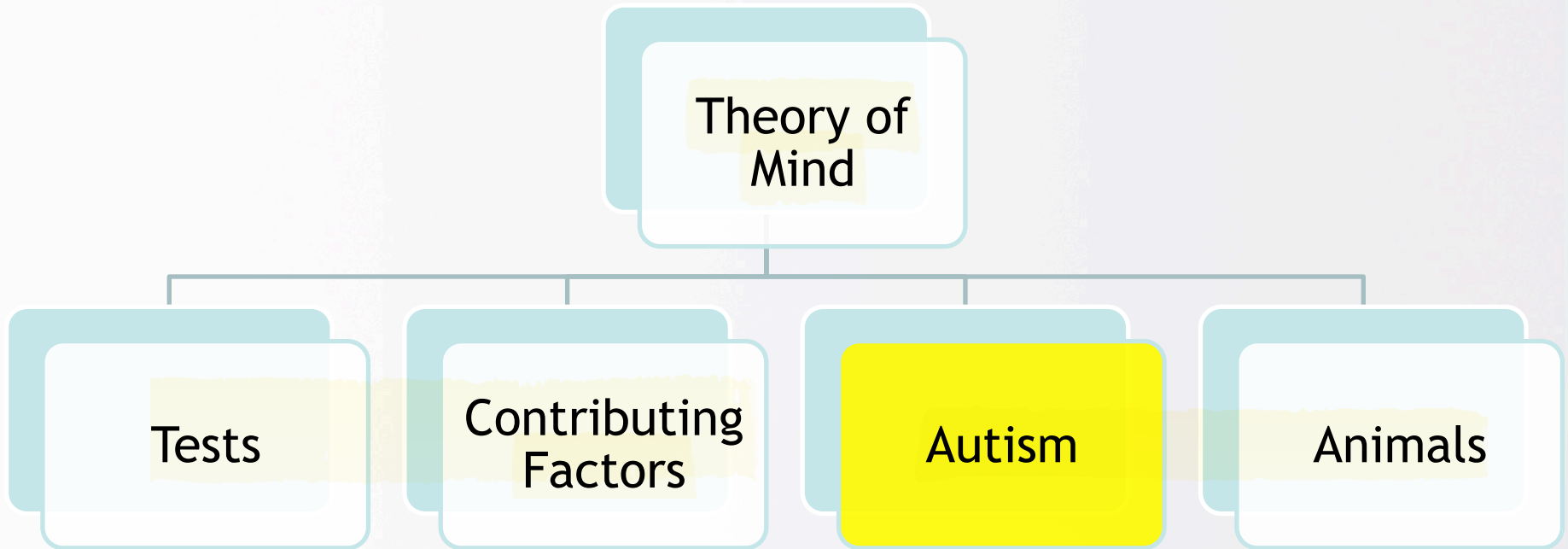
Contributing Factors

- Precursors to theory of mind:
 - Intersubjectivity
 - Infants will imitate facial expressions of others
 - Infants follow gazes of others
 - Understanding goals of others
 - Infants watch actor turn on a light with their head or hands, while their hands are free or holding objects
 - Infant will turn on light with head if he saw the actor's hands were free; infant will turn on light with hands if he saw the actor's hands were full - understand actor's goal!
 - 3 years: children begin to lie
 - Children told not to look under blanket at a toy when experimenter leaves
 - Half the 3 year olds, and majority of 7 year olds lie about looking

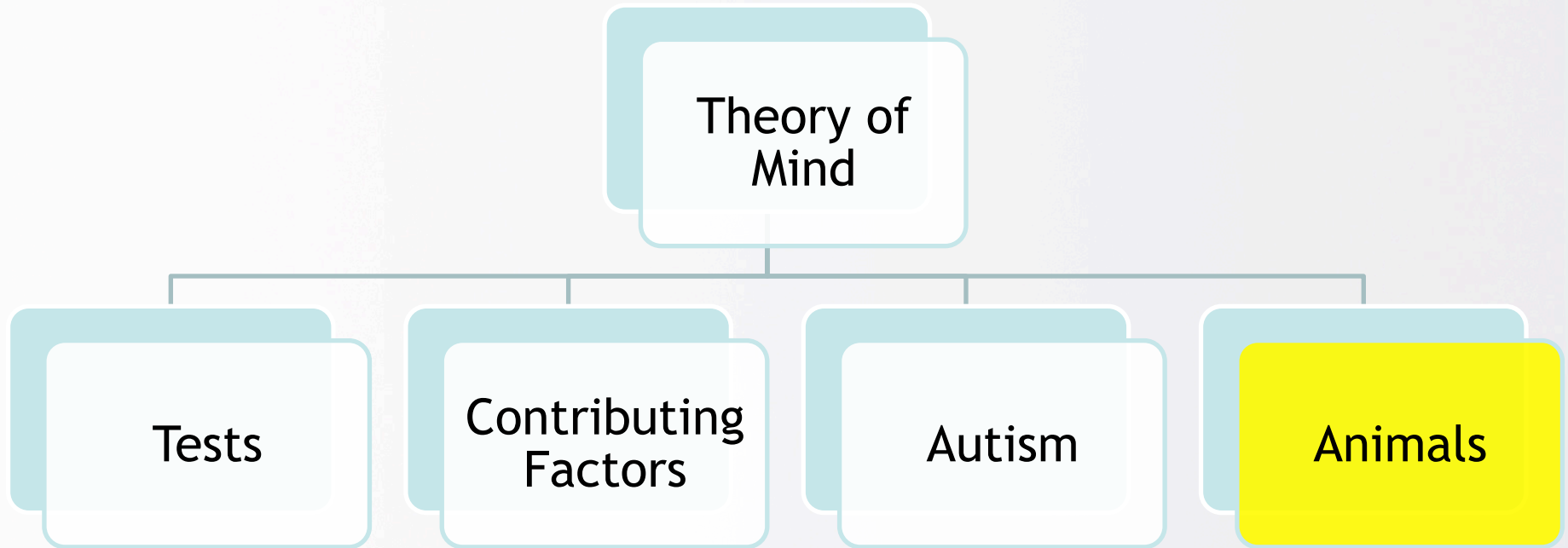
Contributing Factors

- Factors affecting development of theory of mind:
 - **Executive functioning** - control impulses, plan actions, foresee consequences, use working memory
 - **Preservation** - inability to stop performing a behaviour
 - Ex. 3 year olds cannot switch card sorting rules, while 4 year olds can
 - **Practice**
 - Theory of mind develops sooner in children with older siblings
 - Theory of mind develops sooner in children whose parents ask them to reason about the thoughts and ideas of others

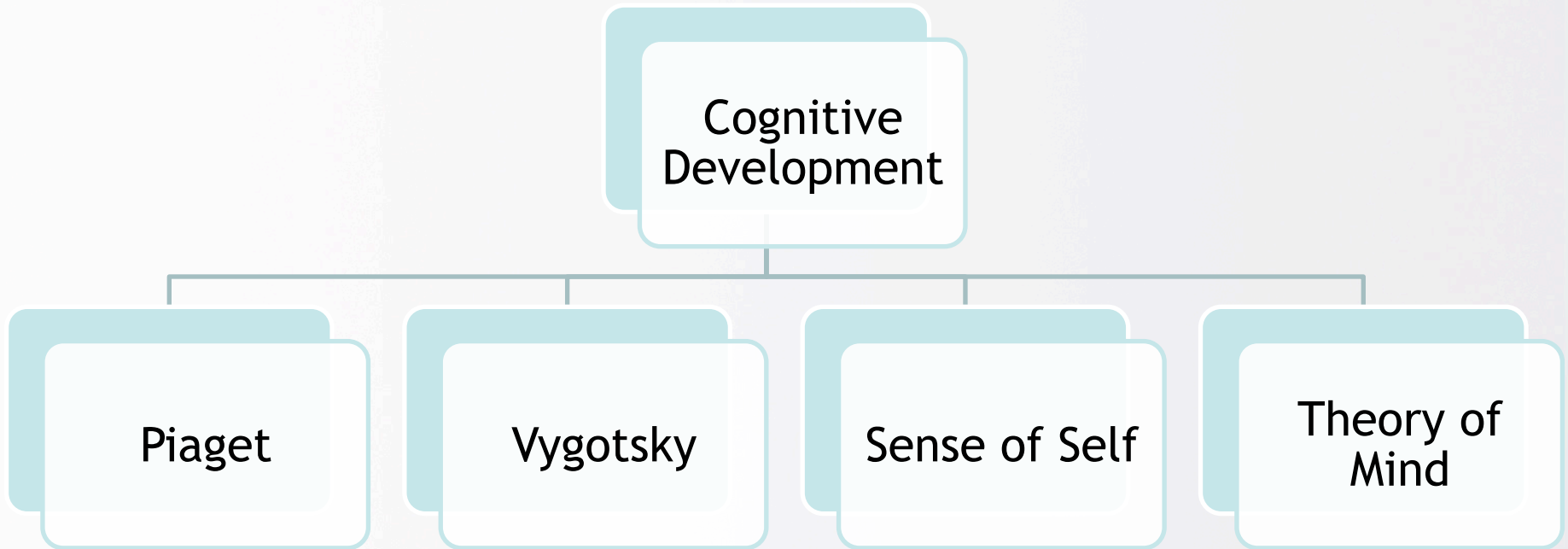
Theory of Mind



- Characteristics of autism spectrum disorder (ASD):
 - Difficulty in social situations
 - Difficulty forming relationships
 - Problem with preservation
- Some propose ASD occurs in children who lack theory of mind
 - Children with ASD have social difficulties and perform poorly on false-belief tasks
- Propose a genetic or environmental factor is responsible for developing theory of mind and it fails to be triggered in children with ASD



- Some chimps may have limited theory of mind
 - Less dominant chimps preferred food that:
 - Had been hidden when a dominant chimp didn't see
 - Had been moved from where the dominant chimp had seen it hidden
 - Had been hidden where a dominant chimp saw, but that dominant chimp was then replaced
 - These chimps didn't show preference when two pieces of food were used, one was seen by dominant chimp and other was not
 - Shows limited theory of mind





Practice MC Question

According to Piaget, _____ are mental representations that describe events and their relation to other concepts.

- a) Cognition
- b) Schema
- c) Concepts
- d) Hypotheses

Answer: b)



Practice MC Question

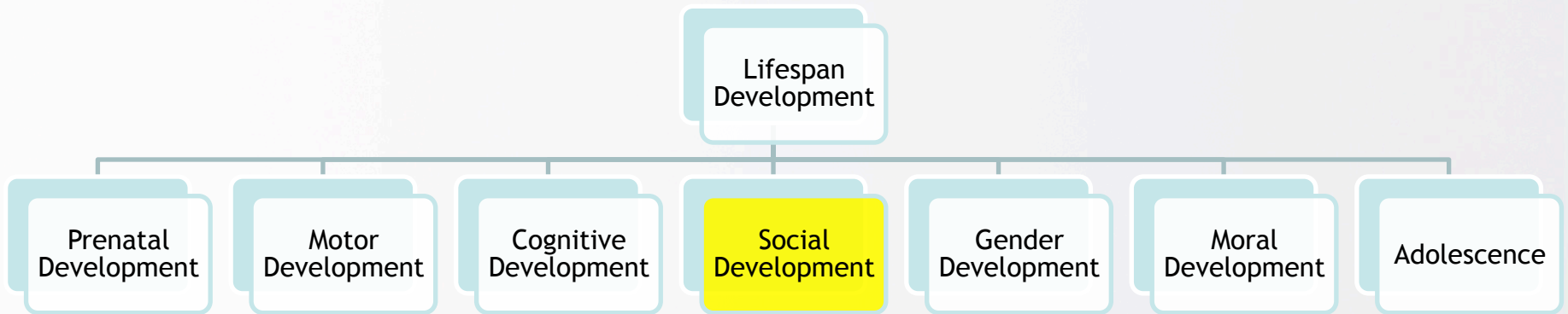
Bobby sees something that looks like a cat and runs toward to pet it. However, it turns out to be a skunk. Bobby gets sprayed and learns that this is not a cat and must be interacted with differently. In Piaget's terms, Bobby is performing a cognitive process called _____.

- a) Schemata formation
- b) Cognitive restructuring
- c) Accommodation
- d) Assimilation

Answer: c)



Lifespan Development





```
graph TD; A[Social Development] --- B[Parenting]; A --- C[Attachment];
```

**Social
Development**

Parenting

Attachment

Parenting

Discipline

Baumrind's
Styles

Animals

Discipline

- **Models** are people who we observe and learn from
 - Early in life, these are our parents and caregivers
- **Punishment:** a penalty given for breaking rules
 - Ex. Positive punishment - spanking
 - Ex. Negative punishment - taking away privileges
 - Less effective than reinforcement for teaching because the child only learns what NOT to do
- **Inductive discipline:** highlights consequences on others while disciplining child
 - Very effective;
 - Teaches and encourages empathy and guilt
 - Ex. Better to explain to child that he shouldn't hit his sister because it hurts her and makes her sad, as opposed to simply spanking him

Parenting

Discipline

Baumrind's
Styles

Animals

Baumrind's Styles

- Parenting styles based on two ways parents interact with their children:
 - **Demandingness:** extent of expectations of the child
 - **Responsiveness:** amount of support given, how much child's needs are met

| | Demandingness | | |
|----------------|---------------|----------------------|-----------------------------|
| | High | Low | |
| Responsiveness | High | <i>Authoritative</i> | <i>Permissive</i> |
| | Low | <i>Authoritarian</i> | <i>Rejecting-Neglectful</i> |



Baurmrind's Styles

1. Authoritative Parenting

- Highly demanding, highly responsive
- Less physical discipline
- Set and explain rules
- Reason with children
- Give freedom
- Children are socially competent, self-confident, (best outcomes)

2. Authoritarian Parenting

- Highly demanding, less responsive
- Discipline with threats and punishment
- Don't explain rules
- Children are unhappy, lack confidence, unsure of themselves, look to authority in moral situations, often aggressive and anxious

3. Permissive Parenting

- Few demands, highly responsive
- Little structure
- Believe children learn best alone
- Few demands to behave appropriately
- Children can't control impulses or act responsibly, they react more intensely and don't do well in school

4. Rejecting-Neglectful Parenting

- Neither responsive nor demanding
- Do not set limits
- Do not monitor
- Discourage children
- Only worried about own needs
- Children are less competent, anti-social, depressed, and engage in risky behaviour

Parenting

Discipline

Baumrind's
Styles

Animals

- Meerkats teach
 - Dead scorpions are given to young to eat
 - Then live scorpions with stinger removed by adult are given to young
 - Young meerkats gain skills to catch own food more quickly with this training
- Styles of maternal behaviour get passed from generation to generation in rats
 - Mother varies amount of licking, grooming and nursing
 - Differences in amount of licking, grooming and nursing affected the stress levels and fear in baby rats



```
graph TD; A[Social Development] --- B[Parenting]; A --- C[Attachment];
```

**Social
Development**

Parenting

Attachment

Attachment

Attachment
Bond

Ainsworth's
Strange
Situation

Attachment
Styles

Factors
Affecting
Attachment

Attachment Bond

- **Attachment:** a social and emotional bond between infant and caregiver
 - Involves warm feelings, care and support they provide
- Lorenz studied imprinting, where moments after birth the infant forms a powerful bond to mother
 - Newborn stays close for safety and nourishment (evolutionary benefit)
- Bowlby believed that the primary caregiver is a secure base from which children form an attachment bond and can go out and explore

Attachment Bond

- Steps to forming attachment bond:
 - Pre-attachment phase (birth to 6 weeks): close, reliant, no distress if parent leaves
 - Attachment-in-the-making (6 weeks to 7 months): prefer familiar people, form expectations for parent-child relationship
 - Clear-cut attachment (7 to 18 months): seek comfort from caregiver, secure base, separation anxiety
 - Reciprocal relationship phase (18 to 24 months): more comfortable being away

- Harlow's Monkeys:
 - Baby monkeys reared with two fake 'mothers':
 - The wire monkey provided nourishment
 - The cloth monkey was soft, and had a face
 - Monkeys spent most of time on cloth monkey
 - They only moved to wire monkey for food
 - Harlow thought they would form a bond to whatever nourished them, but the need for comfort was more important
 - Immediately ran to cloth mother when loud machine scared them
 - Soon after, they began to explore the machine (cloth mother was a secure base)

Attachment

Attachment
Bond

Ainsworth's
Strange
Situation

Attachment
Styles

Factors
Affecting
Attachment



Ainsworth's Strange Situation

- **Stranger anxiety** (6 to 12 months): crying and clinging to caregivers when strangers are around
- **Separation anxiety** (6 to 15 months): crying, arousal, clinging to caregiver when she attempts to leave infant
- **Strange Situation**: 8 episodes during which infant is exposed to events that might cause distress
 - Caregiver and infant enter room
 - Infant plays alone, caregiver doesn't interact
 - Stranger enters, interacts with caregiver and infant
 - Caregiver leaves, separation anxiety?
 - Caregiver returns to soothe infant, stranger leaves
 - Caregiver leaves again, separation anxiety?
 - Stranger returns to comfort infant
 - Caregiver returns to provide comfort
- **Studies infant's reaction and attachment to caregiver**
 - If attachment is successful, infant should use mother as a secure base from which to explore

Attachment

Attachment
Bond

Ainsworth's
Strange
Situation

Attachment
Styles

Factors
Affecting
Attachment

1. Secure Attachment

- React positively to stranger when caregiver is there
- Upset when caregiver leaves
- Calm when caregiver returns
- Secure base behaviour

2. Insecure-Resistant Attachment

- Uncomfortable
- Remain close throughout situation
- Upset when caregiver leaves
- Not comforted when caregiver returns
- Do not play

3. Insecure-Avoidant Attachment

- Pay little attention to or avoid caregiver
- May not be upset when caregiver leaves
- Easily comforted by stranger
- May avoid caregiver when she returns

4. Disorganized/Disoriented Attachment

- No standard reaction
- Contradictory behaviour - upset when parent leaves, avoid her when she returns
- Wants to approach caregiver, but fear her reactions
- Most troubled

Attachment

Attachment
Bond

Ainsworth's
Strange
Situation

Attachment
Styles

Factors
Affecting
Attachment



Factors Affecting Attachment

- Parental sensitivity
 - Secure: caregiver responds promptly and appropriately to baby's needs
 - Avoidant: caregiver appears insensitive to infant's needs
 - Resistant: caregiver is impatient with infants, more interested in own activities
 - Disoriented: caregiver interferes with infant's behaviours, exhibit fearful and disoriented responses themselves



Factors Affecting Attachment

- **Temperament:** differences between infants in the way they respond to their environment and their emotionality
 - Evident very early and remains stable
 - Three basic types:
 - Easy baby: playful, calm, adaptable
 - Difficult baby: slow to adjust, negative reactions
 - Slow-to-warm-up baby: low activity level, seems difficult at first but eventually warms up
- **Internal working model:**
 - Child uses the relationship with the primary caregiver as a model for other relationships later in life
 - Develop treatment and worthiness expectations
 - Securely attached infants have more positive relationships in adulthood and feel better about themselves



```
graph TD; A[Social Development] --- B[Parenting]; A --- C[Attachment];
```

**Social
Development**

Parenting

Attachment



Practice MC Question

In the Strange Situation, an infant who shows moderate signs of distress when her mother leaves, but who is easily consoled upon her return is considered to be _____ attached.

- a) Resistantly
- b) Avoidantly
- c) Securely
- d) Ambivalently

Answer: c)



Practice MC Question

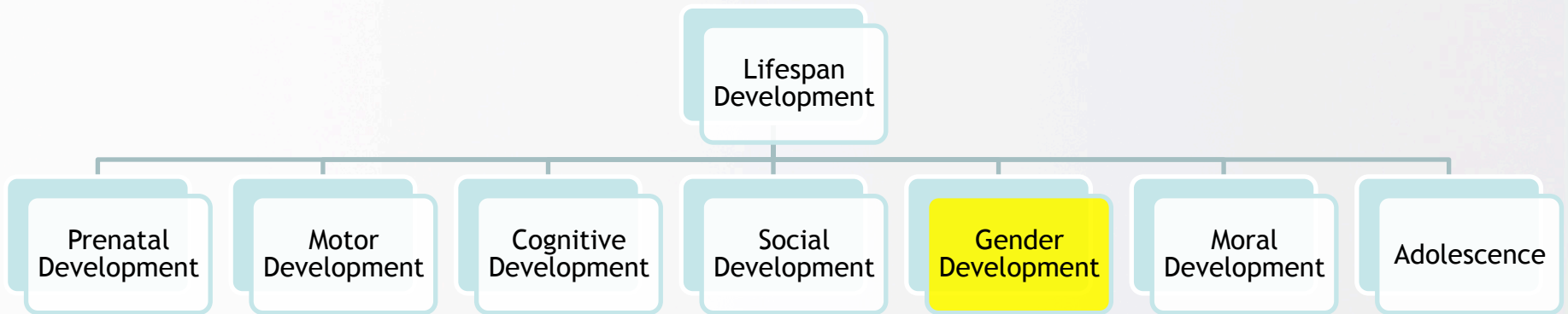
The approach to child-rearing that leads to children who are self-controlled, independent, and socially competent is:

- a) Permissive
- b) Social guidance
- c) Authoritarian
- d) Authoritative

Answer: d)



Lifespan Development





```
graph TD; A[Gender Development] --- B[Gender]; A --- C[Emotions]; A --- D[Friendships];
```

Gender Development

Gender

Emotions

Friendships

- **Gender identity:** sense of being male or female
- **Gender roles:** cultural expectations about how men and women should think and behave, ex. women should stay at home to cook and clean
- **Gender stereotypes:** beliefs about differences in the behaviours, abilities and personality traits of males and females
 - Ex. It is okay for women to cry, but it is not okay for men to cry

Cultural causes of gender role differences:

- Gender roles often first placed on children by parents:
 - Parents provide gender appropriate toys, by 18 months children prefer gender-stereotyped toys
 - Parents respond positively or negatively to gender-appropriate and inappropriate play
- Children are treated differently by teachers based on gender stereotypes (ex. teachers have higher expectations of boys in science and girls in language)

- Biological causes of gender role differences:
 - Girls:
 - Earlier verbal development
 - More effective expression and understanding of emotion
 - More compliant
 - Boys:
 - Stronger spatial abilities
 - More aggressive
 - Take more risks
 - Girls prefer interactions in pairs, boys prefer larger groups
 - Boys play more aggressively, females play more calmly
 - Children play in same-sex groups which demonstrate these types of play



```
graph TD; A[Gender Development] --- B[Gender]; A --- C[Emotions]; A --- D[Friendships];
```

Gender
Development

Gender

Emotions

Friendships

- Emotions are:
 - Feelings about world
 - Physiological responses to events
 - Cognitive events related to feelings
 - Goals
- We:
 - Communicate our needs through emotions
 - Understand others' needs through emotions
- There are two main theories about how emotions develop in humans

- **Discrete emotions theory:**
 - Emotions are innate and accompanied by distinct bodily and facial signs
 - Emotions aid in survival
 - There are 4-10 basic emotions present at birth
- **Functionalist approach:**
 - Emotions not fully innate
 - Assembled in the moment to accomplish goals
 - Emotions are dependent on the presence of others and their identity
 - Embarrassment and shame are not present at birth
 - Develop later in response to violations of social norms that we have internalized

- **Emotional self-regulation:**
 - Initiation or suppression of emotion
 - Develops slowly from experience
 - **Infants: limited emotional self-regulation**
 - Turn heads away
 - Some calm themselves instead of crying for attention
 - **3 to 6 years: more effective**
 - Distract themselves
 - Reinterpret events in a more positive way
 - **Adolescence: regulate emotions in complex ways**
 - Aware of social consequences of public display of emotion
 - Change display of emotions depending on people and context



```
graph TD; A[Gender Development] --- B[Gender]; A --- C[Emotions]; A --- D[Friendships];
```

Gender
Development

Gender

Emotions

Friendships



Friendships

- Play is important for learning and practicing skills for survival
- Steps of learning to play:
 - 6 months: infants make more sounds, smile, and laugh when near to children of same age
 - 12 to 18 months: give-and-take interactions
 - Show preference for certain peers
 - 14 months: imitate actions of peers
 - 24 months: more comfortable in social situations with a familiar peer
 - 4 years: much play is alone or parallel (alongside but no interaction) until this age

Friendships

- Factors affecting choice of friends:
 - Physical factors: age, sex, ethnicity (decreases with age)
 - Social similarities: play types, aggression
 - Gender: prefer playing with same-sex children (until late adolescence)
 - Common activities
 - Clear communication and good conflict resolution
- Changes in friendships:
 - 6 to 8 years: friends are people with play with most often
 - 9 years: friends are people we fit in with and who help us
 - Adolescence: friends have a mutual acceptance for each other and a sense of trust

Gender Development



```
graph TD; A[Gender Development] --- B[Gender]; A --- C[Emotions]; A --- D[Friendships]
```

Gender
Development

Gender

Emotions

Friendships



Practice MC Question

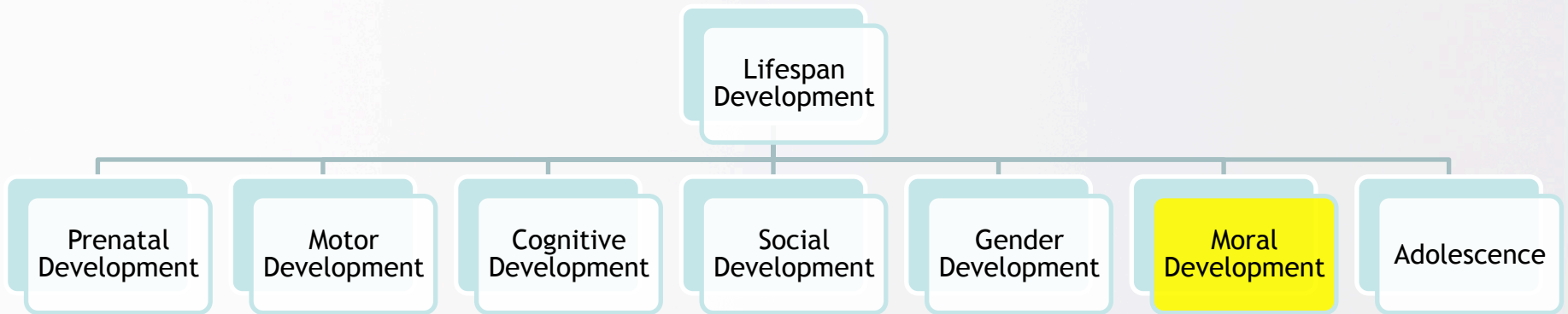
Which of the following has been shown to be a reliable gender difference?

- a) Girls show stronger spatial abilities
- b) Girls show a higher tendency towards compliance
- c) Boys show earlier verbal development
- d) Girls are more likely to show early language disorders

Answer: b)



Lifespan Development



Moral Development

Moral
Development

Prosocial
Behaviour

Piaget

Kohlberg



Prosocial Behaviour

- **Altruism:** acts done for the benefit of another person at a cost to the performer
 - Ex. Donating money to charity
- **Prosocial behaviour:** altruistic acts, and acts that benefit another person
 - Ex. Cooperating, helping, comforting
 - Children begin to engage in prosocial behaviour in the first two years of life
 - Evolutionary advantage: by helping someone, they are more likely to help you
- **Empathy:** person is affected by another person's emotions

- **Antisocial behaviour**
 - Example: physical aggression
 - 18 months: signs of physical aggression emerge
 - Used to get something
 - 2.5 years: physical aggression peaks, verbal aggression increases with language abilities
 - Used more for defense as a child gets older
 - Males engage in more physical aggression
 - Girls engage in more indirect aggression
 - Ex. Spreading rumours
 - Aggression is fairly stable throughout life

Moral
Development

Prosocial
Behaviour

Piaget

Kohlberg

- Moral realism
 - 5 to 10 years
 - Egocentrism
 - Adherence to rules (cannot be changed)
 - Evaluate situations in terms of personal consequences
- Morality of cooperation
 - 10 years and up
 - Judge an act by the intentions of the actor as well as consequences of the act
 - Ex. The boy who accidentally broke 4 plates should not receive as severe a punishment as the boy who broke 1 on purpose
 - Behaviour is guided by the effect it will have on others
 - Rules are more flexible

Moral
Development

Prosocial
Behaviour

Piaget

Kohlberg

- Gave people stories like the “Heinz dilemma” and asked what the character should do
 - Reasoning behind the answer was most important
- Came up with three levels of moral reasoning and seven stages
 - People go through stages in order
 - Not everyone goes through all the stages

- **Pre-conventional level:** moral behaviour is based on authority and punishment
 - Stage 1: morality of punishment and obedience
 - Blindly obey authority and avoid punishment
 - For Heinz - fear of Heinz being punished for stealing or letting his wife die
 - Stage 2: morality of naive instrumental hedonism
 - Make moral choices egocentrically, guided by good or bad outcomes for themselves
 - For Heinz - risks and benefits of stealing the drugs

- **Conventional level:** understand that the social system has an interest in people's behaviour
 - Stage 3: morality of maintaining good relations
 - Want to be regarded by people as good and well behaved
 - For Heinz - should steal or he is heartless, should not steal because he would be a criminal
 - Stage 4: morality of maintaining social order
 - Laws and moral rules maintain social order, so we must obey them
 - For Heinz - protecting a life and respecting people's property are rules that maintain social order

- **Post-conventional level:** moral rules have some underlying principles that apply to all situations and societies
 - Stage 5: morality of social contracts
 - Recognize individual rights sometimes take precedence
 - Stage 6: morality of universal ethical principles
 - Rules are justified by ethical values such as the value of human life
 - Stage 7: morality of cosmic orientation
 - Adopt values that go against society's norms
 - Not very many people reach stage 7, and not everyone reaches the post-conventional level

- Criticisms of Kohlberg's stages:
 - Stages are not discrete
 - People do not always reason at the highest level they are capable of, they reason at the level most convenient for that goal
 - Higher stages cannot be applied to other cultures
 - Ex. Some non-Western cultures place more emphasis on cohesion, so people there do not progress to stages involving commitment to personal ethical principles
 - Most of Kohlberg's research was done on boys
 - Girls may have different moral reasoning and are less worried about justice and rights than boys are

Moral Development

Moral
Development

Prosocial
Behaviour

Piaget

Kohlberg



Practice MC Question

A person who wants to be looked upon by others as having a good heart and being well behaved is likely in Kohlberg's _____ stage of moral development.

- a) Conventional
- b) Post-conventional
- c) Pre-conventional
- d) Moral realism

Answer: a)



Practice MC Question

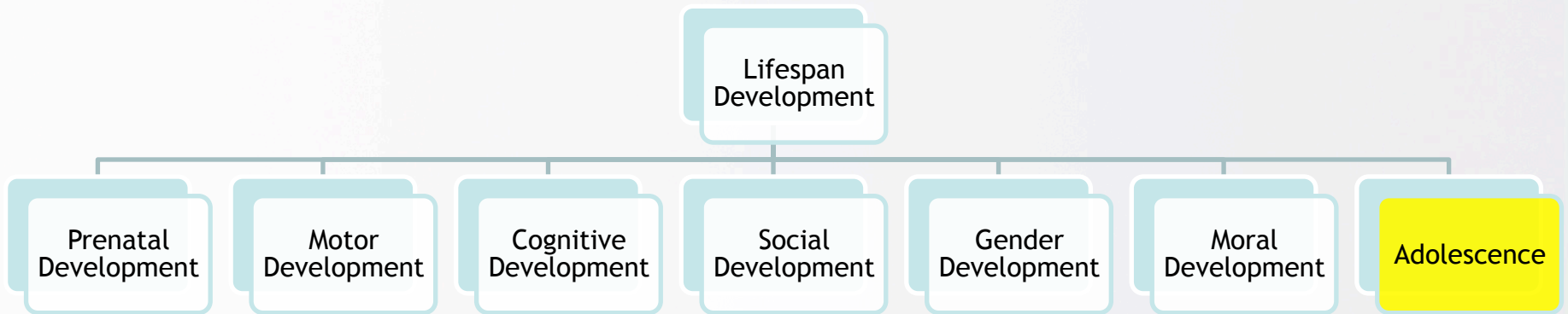
Kohlberg's method for studying the development of moral reasoning was to:

- a) Conduct cross-sectional research
- b) Conduct a series of cross-cultural studies involving moral dilemmas
- c) Place children in positions in which their honesty and truthfulness could be observed
- d) Ask children to respond to stories involving moral dilemmas

Answer: d)



Lifespan Development



Adolescence

Physical
Development

Social
Development

Other
Theories of
Development

Physical Development

Physical
Development

Puberty

CNS
Development

Puberty

- Transition from childhood to adulthood
- Begins when the hypothalamus instructs secretion of hormones to stimulate the gonads to secrete sex hormones
 - Males produce more testosterone and females produce more estrogen
- Females generally experience puberty before males
- Sex hormones cause the development of primary sex characteristics:
 - Maturation of ova, production of sperm
 - Essential to the ability to reproduce

Puberty

- Sex hormones develop secondary sex characteristics:
 - Physical changes that distinguish males from females
 - Boys develop more muscles, facial hair, voices deepen
 - Girls' breasts grow, pelvises widen
- 11 to 13 years: females will begin menarche, their first menstruation
 - 12 to 18 months after menarche, ovulation begins
- 13 years: spermarche, the time of first ejaculation for males

**Physical
Development**

Puberty

**CNS
Development**

- **Neurogenesis** is almost complete 18 weeks after conception
- We have few synapses when we are born
 - **Synaptogenesis** (formation of new synapses) happens a lot prenatally and during the first year
 - We have the most synapses at age 12
- **Synaptic pruning** is the selective elimination of synapses
 - Increases efficiency
 - Happens in infancy, childhood and adolescence
 - Neurons undergo apoptosis
 - **Synaptic plasticity**: neurons shed connections to other neurons if there is not much activity in the connection

- **Experience-dependent plasticity:** neurons create new or stronger connections in response to their use
 - Ex. Brains of musicians who use their left hand more often have greater representation of the left hand in their motor cortex
- **Experience-expectant plasticity:** brain development is guided by experiences that will most likely take place in the environment in which we are developing
 - Ex. Used for early organization of the visual system
- **Myelination:** development of myelin sheaths around neurons
 - Begins before birth, finishes in early adulthood

Adolescence

Physical
Development

Social
Development

Other
Theories of
Development

**Social
Development**

**Erikson's
Psychosocial
Theory**

**Marcia's
Identity
Development**



Erikson's Psychosocial Theory

- Divides development into eight stages
 - People encounter a series of crises in relations with others and development is determined by how these conflicts are resolved
 - The primary crisis faced by adolescents is identity versus role confusion
 - Failure to form an identity leads to role confusion



Erikson's Psychosocial Theory

- **Stage 1: trust vs mistrust**
 - Infant totally reliant on caregiver
 - Needs met = trust, needs not met = mistrust
- **Stage 2: autonomy vs self-doubt**
 - Child begins to interact with world
 - Gains autonomy or self-doubt if exploration is punished
- **Stage 3: initiative vs guilt**
 - Child sets goals
 - Meet goals = feel confident, don't meet goals = feel guilt and unable
- **Stage 4: competence vs inferiority**
 - Child begins more structured lifestyle (school, chores)
 - Adapt=feel competent, don't adapt well=feel inferior



Erikson's Psychosocial Theory

- **Stage 5: identity vs role confusion**
 - Begin to form the adult self
 - Form opinion about self to create identity, or don't form opinions and are confused about role
- **Stage 6: intimacy vs isolation**
 - Learn to share themselves with others
 - If successful=feel intimate, if unsuccessful=feel isolated
- **Stage 7: generativity vs stagnation**
 - Build relationships, contribute meaningful work
 - Feel isolated if choose not to do these things
 - Longest stage
- **Stage 8: integrity vs despair**
 - Want to feel completion or wholeness
 - Positive resolution to earlier crises=integrity, negative resolution=despair

**Social
Development**

**Erikson's
Psychosocial
Theory**

**Marcia's
Identity
Development**



Marcia's Identity Development

- Describes Erikson's identity crisis with four outcomes
- Developing an identity consists of two components:
 - **Crisis:** adolescent struggles to resolve issues involving goals and values
 - **Commitment:** leads to a specific course of action after considering other alternatives

| | Crisis | | |
|------------|--------|--------------------------|---------------------------|
| | | Yes | No |
| Commitment | Yes | <i>Identity Achieved</i> | <i>Foreclosure</i> |
| | No | <i>Moratorium</i> | <i>Identity Diffusion</i> |



Marcia's Identity Development

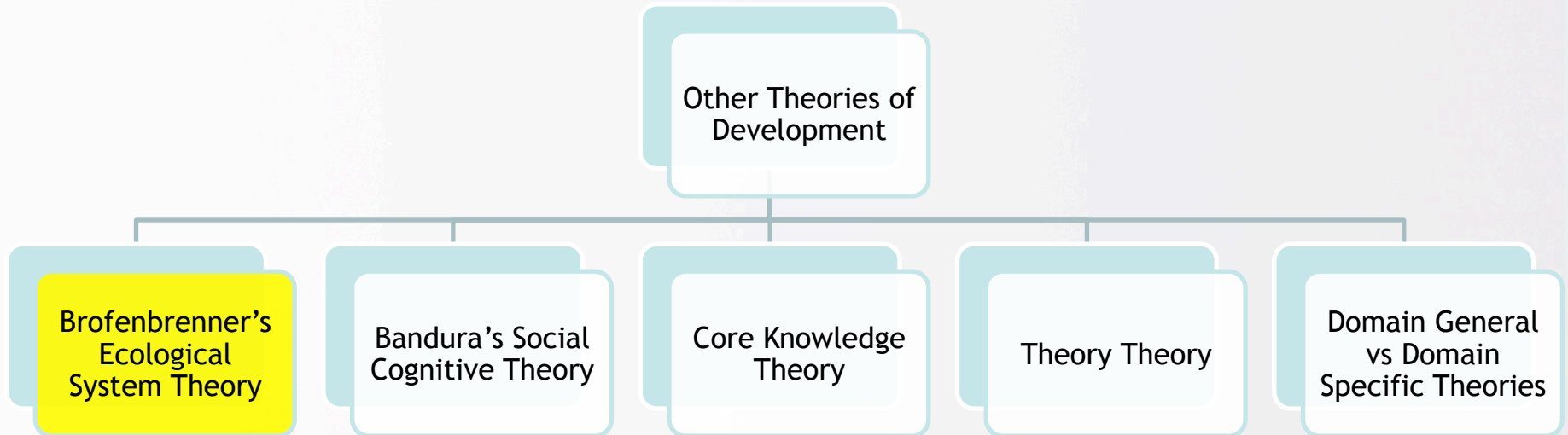
- **Identity achievement:** experienced a crisis, considered solutions, committed to action
 - Often not reached until adulthood
- **Moratorium:** experience a crisis, unresolved, so cannot commit - still exploring options
- **Foreclosure:** not yet experienced a crisis, but are committed to a course of action
- **Identity diffusion:** do not experience a crisis, and are not committed

Adolescence

Physical
Development

Social
Development

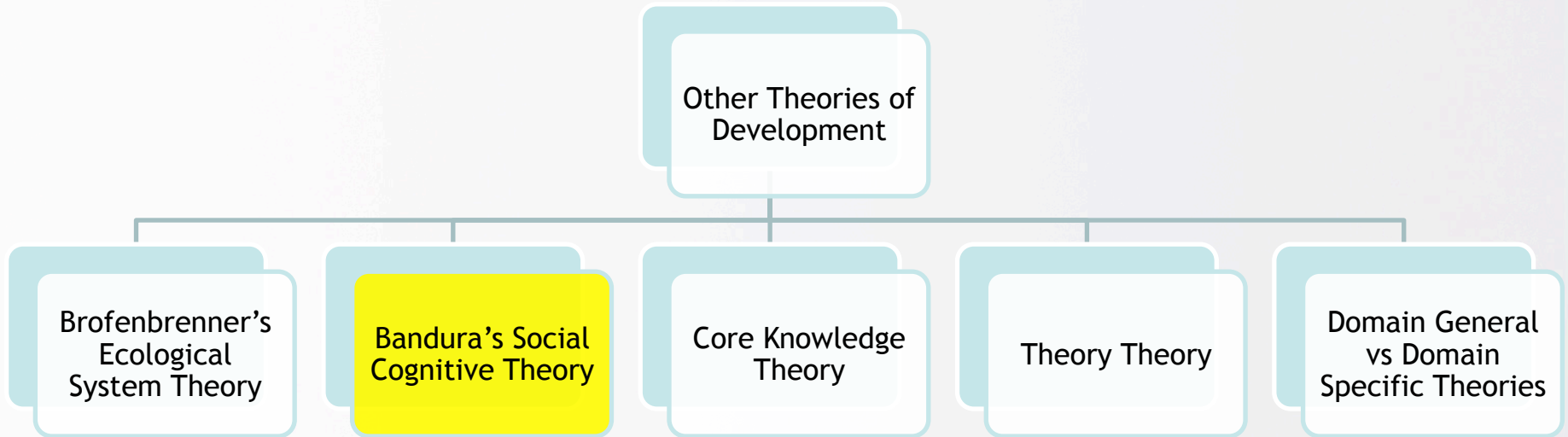
Other
Theories of
Development





Bronfenbrenner's Ecological System Theory

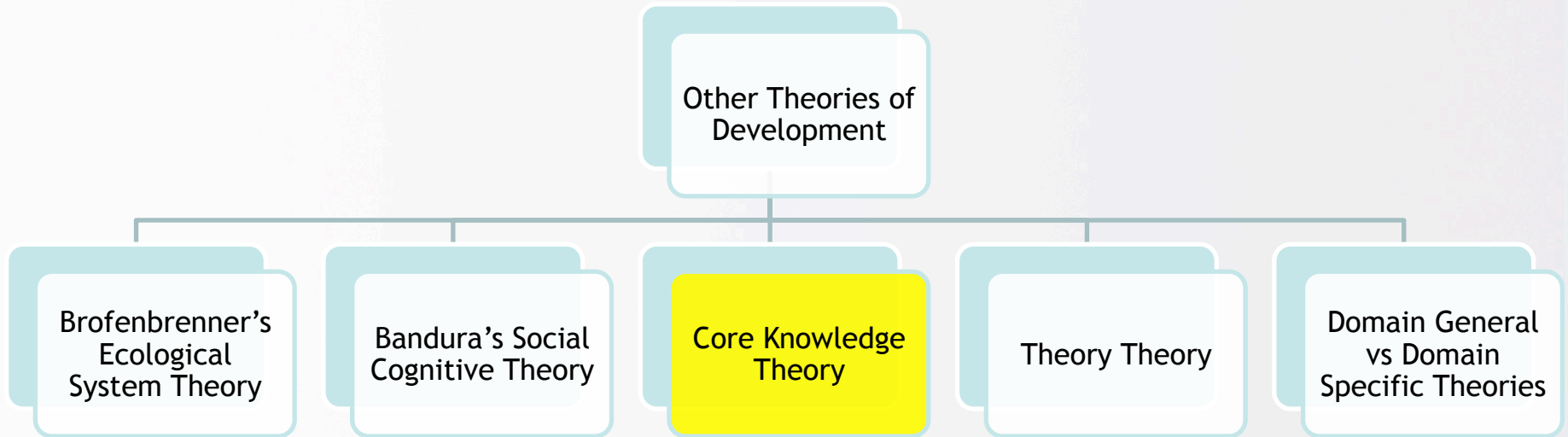
- The developing person exists in overlapping systems
- 5 types of system:
 - Microsystem - child and relationships with immediate surroundings
 - Ex. Parents, peers
 - Mesosystem - connections between different relations in the microsystem
 - Ex. Parents relationship with each other
 - Exosystem - things child doesn't experience directly, but that still have an effect
 - Ex. Nature of parent's work schedule
 - Macrosystem - larger social constructs
 - Ex. Religion, social class
 - Chronosystem - historical changes that influence development
 - Ex. Role of computers in development today





Bandura's Social Cognitive Theory

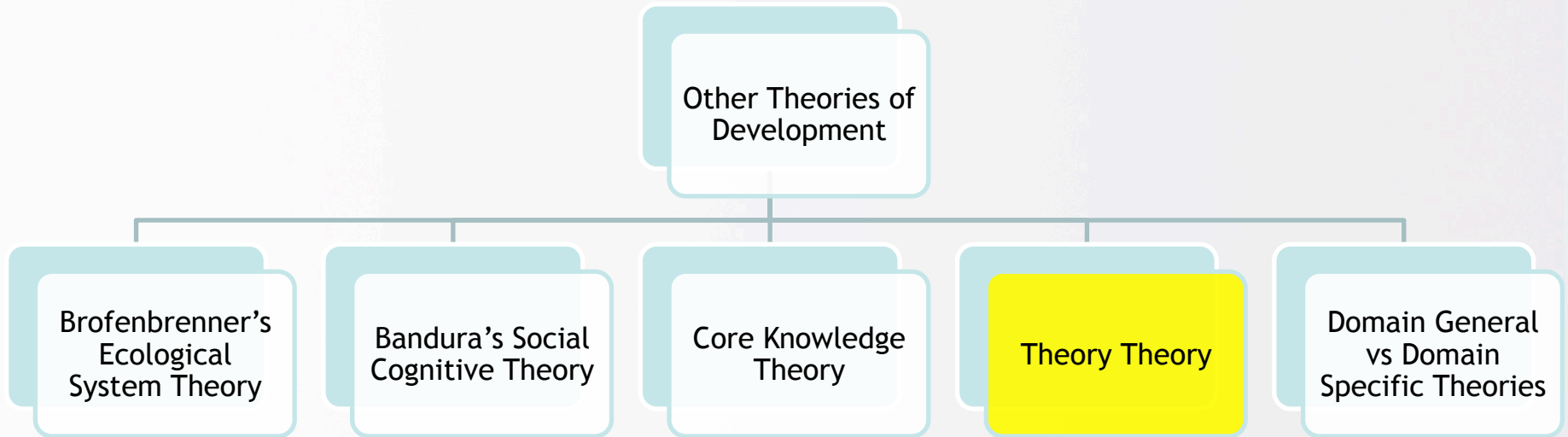
- Children learn through observation and imitation
 - Ex. Bobo doll experiment
 - **Reciprocal determinism:** environment has an effect on child → child influences environment → environment affects them differently
 - Ex. Child plays violent video games he sees advertised → child seeks out more aggressive friends in environment → friends encourage child to play even more aggressive games





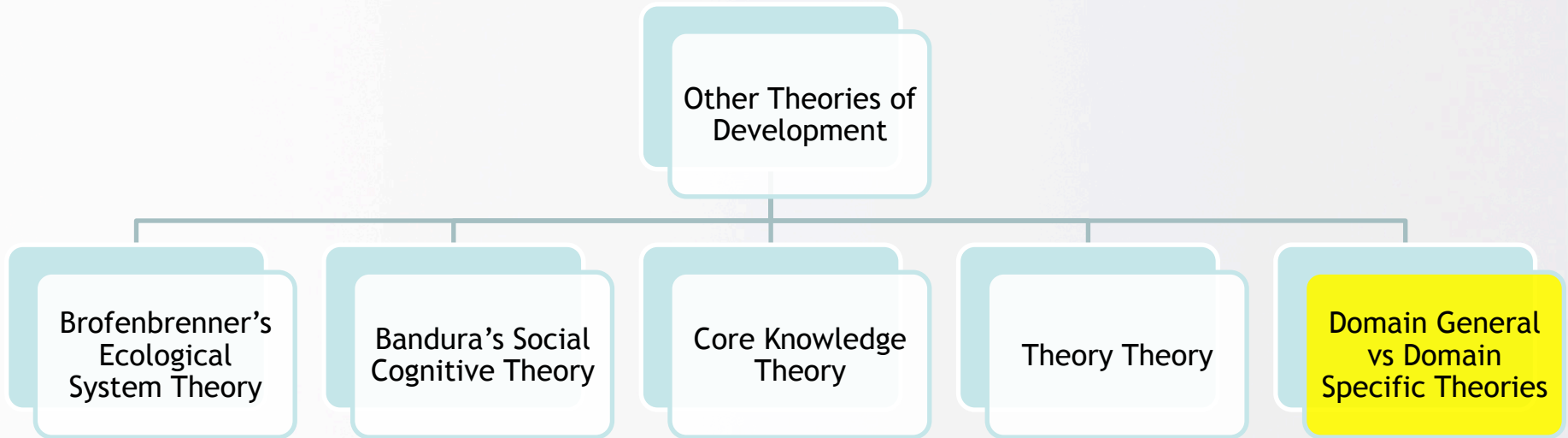
Core Knowledge Theory

- Brain mechanisms allow babies to learn skills very quickly or understand phenomena
 - Ex. Reflexes
- Evolution puts these “core knowledge” mechanisms in place
 - Beneficial to have basic knowledge, such as reflexes, preference for faces, etc.



Theory Theory

- Children learn and develop knowledge the same way that scientists do
- Form hypotheses, test them, and draw conclusions to support or change them
- Children have informal theories about biology, physics and psychology
 - Revise these based on experience
 - Ex. 3 month old infants are surprised an object does not fall when it is unsupported because it goes against their informal theory of physics





Domain General vs Domain Specific Theories

- **Domain general theories**
 - Minds of infants are open to input and all information they receive could be of equal importance
 - Ex. Piaget's and Vygotsky's theories
- **Domain specific theories**
 - Brain is predisposed to certain types of information
 - Brain treats different types of information as being separate
 - Ex. Core knowledge theories
- **Theory-theorists take a position between domain general and domain specific theories**
 - Brain has a few initial constraints that can be changed through experience

Adolescence

Adolescence

Physical
Development

Cognitive
Development

Other
Theories of
Development



Practice MC Question

Erikson believed the primary crisis faced by adolescents is:

- a) Autonomy vs. self-doubt
- b) Integrity vs. despair
- c) Identity vs. role confusion
- d) Trust vs. mistrust

Answer: c)



Practice Short Answer Question

Describe the concept of “theory of mind”. Include one task used to test “theory of mind” and how it relates to children with autism spectrum disorder.

- Theory of mind: the ability to reason about what other people might know or believe and how those beliefs will relate to their actions
 - Develops around age 4
- Tested using false-belief tasks
 - Example: container test
- Theory of mind and ASD
 - Children with ASD perform poorly on false-belief tasks
 - Believe a genetic or environmental factor responsible for triggering theory of mind is not triggered in children with ASD



Evolutionary Psychology

Evolutionary Psychology

development of
evolutionary
theory

natural selection

common
misunderstandings

sociobiology

Natural Selection

- **Adaptive Significance** = effectiveness of behaviours that help organisms to adapt to changing environmental conditions
- **Proximate Causes** = immediate environmental conditions that affect behaviour
 - eg. testosterone from nearby brothers in the womb affects development of sexual behaviours in male gerbils
- **Ultimate Causes** = evolutionary conditions that have slowly shaped the behaviour of a species over generations
 - eg. males who gestated next to females were better fathers later on



Natural Selection

- **Natural Selection**
 - some members of a species will produce more offspring than will others
 - any animal that has a characteristic that helps it to survive is more likely to live longer and to produce more offspring than animals that do not have this characteristic
- natural selection is based on two premises:
 - individuals in a population show **differences in heritable traits**
 - the environment can only sustain so many individuals, thus there is **competition**
- **Reproductive Success** = number of viable offspring produced by an individual, compared to the number of viable offspring produced by other members of the same species
 - “bottom line” of evolution is reproductive success - not physical success

Natural Selection

- Adaptations contribute to the reproductive success of an individual
- an **adaptation** must:
 - have a biological purpose
 - operate the same in different cultures and over time
 - have been related to reproductive success in the past
 - not be able to explained for some other reason
- eg. male sexual interest in females with signs of reproductive capability
 - Males prefer young, average weight females with average and symmetrical faces (symmetrical face = no genetic anomalies)
 - these attributes are associated with the presence of hormones that facilitate female fertility
 - this adaptation maximizes attraction and motivates men to seek out reproductively fit females

development of
evolutionary
theory

natural selection

common
misunderstandings

sociobiology

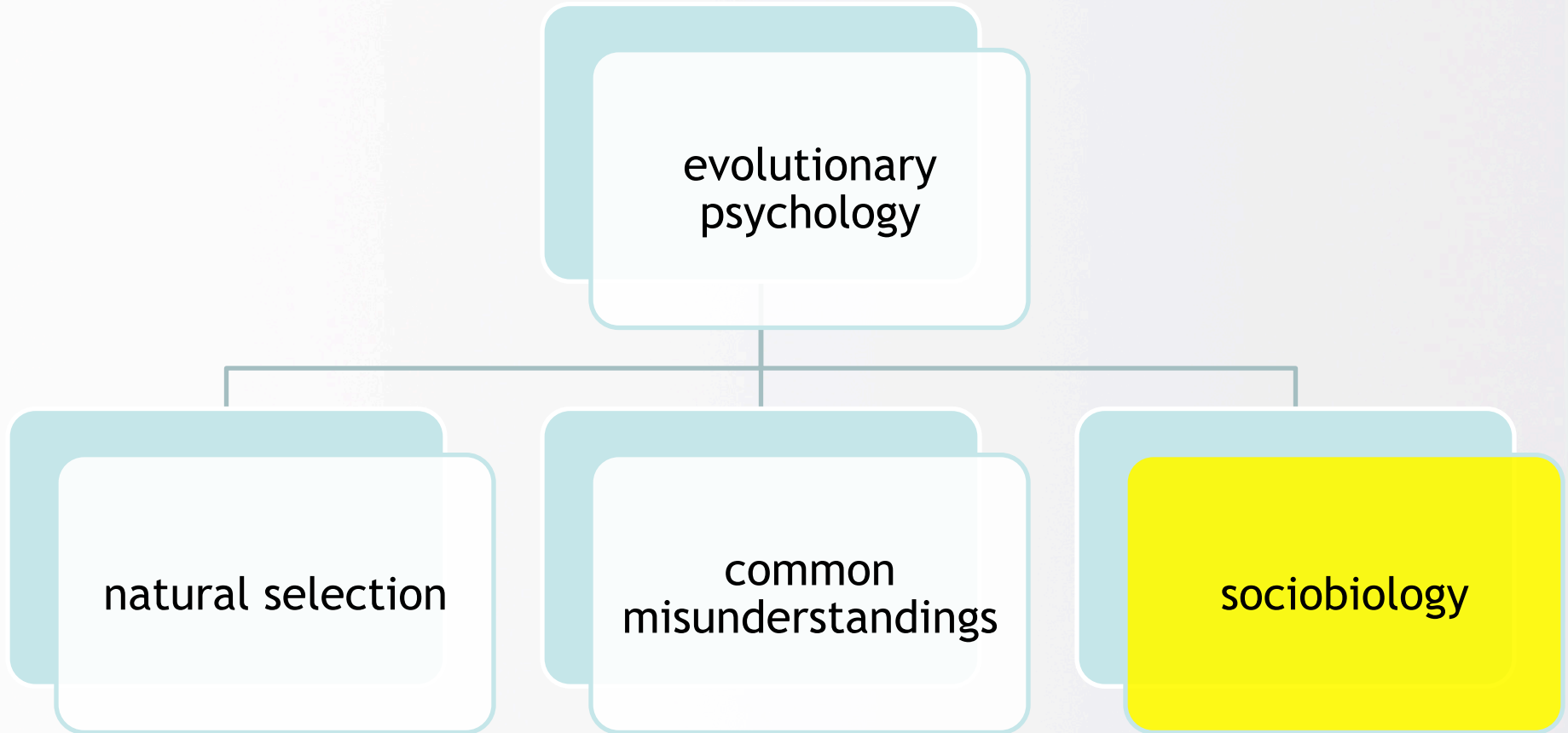


Common Misunderstandings

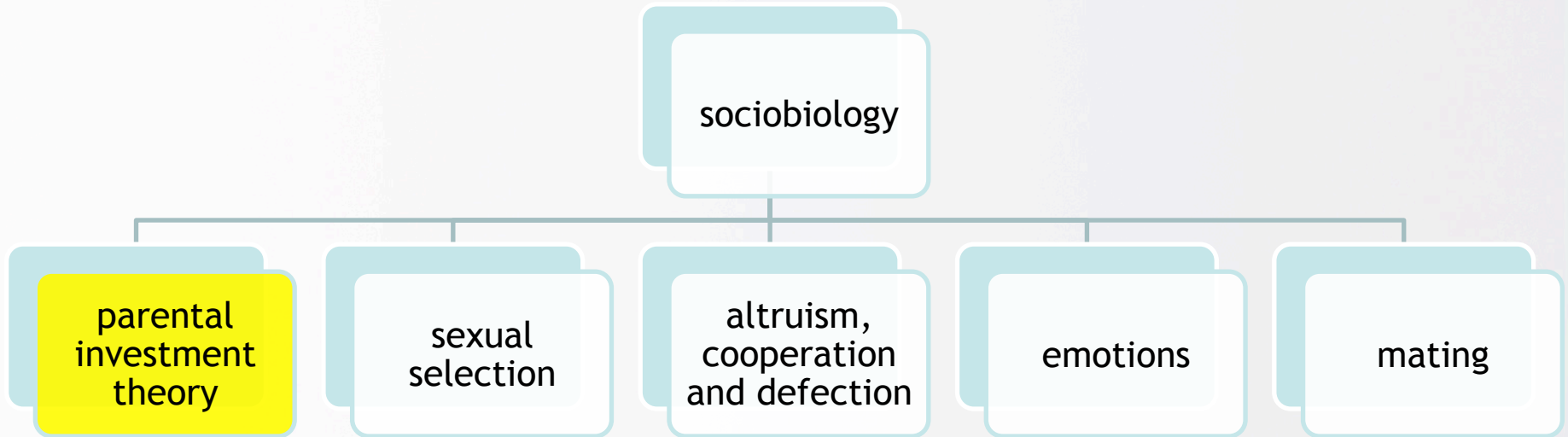
- evolution has no predetermined plan/foresight
- people are not more “highly evolved” than other animals
 - Each organism evolves differently to deal with different conditions in their environment
- characteristics produced by evolution are not morally good or bad
 - if we do this, we commit naturalistic fallacy
- characteristics that have been produced by evolution can have good, bad or neutral effects today
 - eg. liking for sugar was good in the past, liking for sugar makes people overweight today

Common Misunderstandings

- all characteristics produced by evolution are often influenced by the environment
 - eg. PKU is determined by genes, but can be managed by eating a certain diet
- genes cause organisms to act differently in different environmental contexts
 - facultative behaviours are determined by the proximal environment
 - obligate behaviours develop independently of the environment
- **Epigenetic Modification** - changes in cellular inheritance that can occur due to the environment
 - possibility that an acquired characteristic could be inherited by offspring



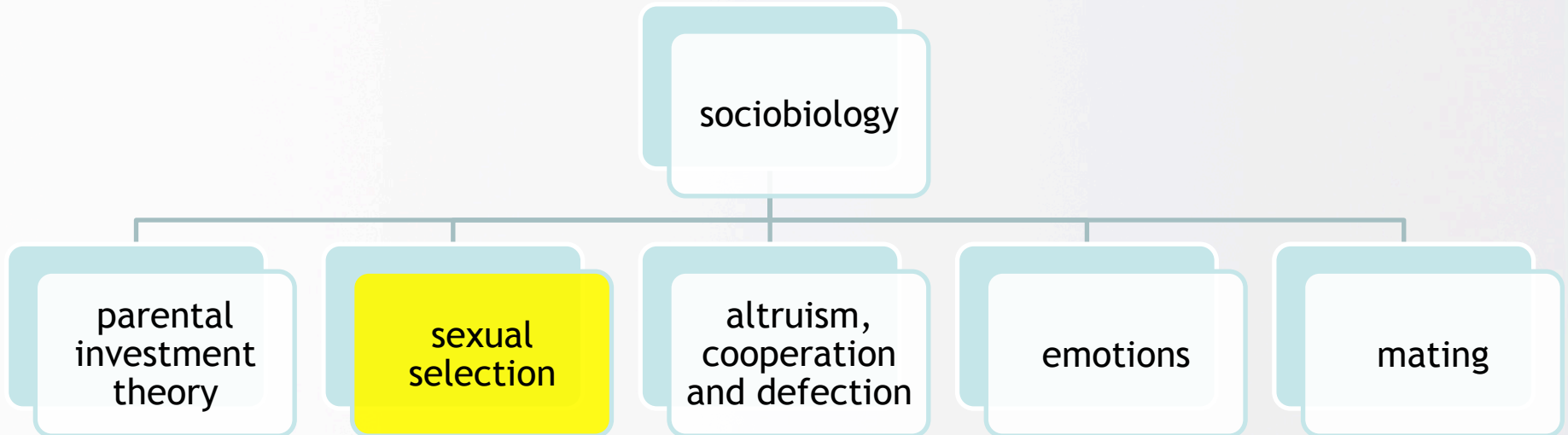
Sociobiology



- **Parental Investment** → energy, time, risks and resources that a parent spends in procreation and in the feeding, nurturing and protecting of offspring
 - the sex that has the largest minimal parental investment has lower reproductive rate
 - This is why humans don't have huge amounts of children
 - the reproductive success of this sex is not limited by access to the other sex
 - however, the sex that has the smallest minimal parental investment is limited by access to the other sex
 - i.e. male humans vs. female humans
 - sex that has the highest potential reproductive rate is under pressure to compete for access to other sex
 - From evolutionary perspective, men are only limited by access to females, so they need to compete while females can select

- example of parental investment theory:
mating pattern of elephant seals
 - males are physically larger
 - males do not contribute much parental investment
 - males fight for access to other females
 - females mate with only a few males, while males mate with many females
 - females prefer to mate with dominant males

Sociobiology

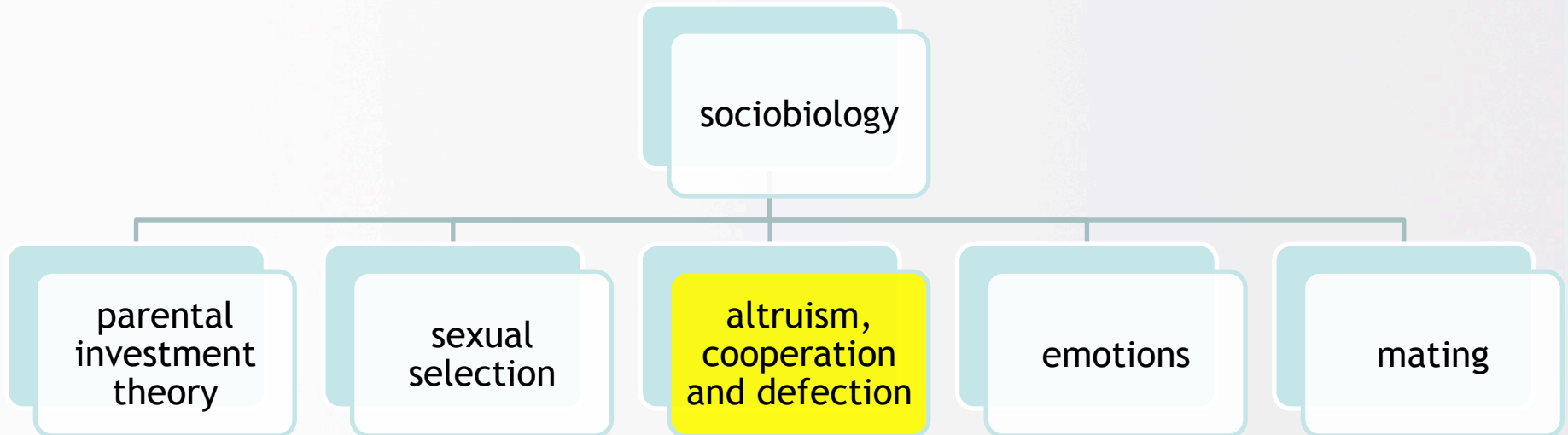


- two forms of sexual selection:
 - 1) **Epigamy** - mating based on **physical features and displays**
 - Also known as **Intersexual Selection**
 - female preferences cause males to evolve certain characteristics
 - Led to evolution of attractive physical features
 - eg. females choose male African long-tailed widow birds who have the longest tails (experiment showed males with a “double tail” had the most females)

2) Intrasexual selection - competition between individuals of the same sex

- produces characteristics that provide reproductive advantages
- Led to evolution of male alternative and conditional mating strategies
 - Alternative Strategies = behavioural strategies used by genetically different males
 - » eg. male bluegill sunfish either grow big and adopt a parental strategy OR grow small and adopt a sneaky mating strategy
 - Conditional Strategies = behavioural strategies used by genetically identical males
 - » eg. males of one species of grasshopper either display to court females OR stalk them to force copulation
 - » stalking is used if court displays are not successful

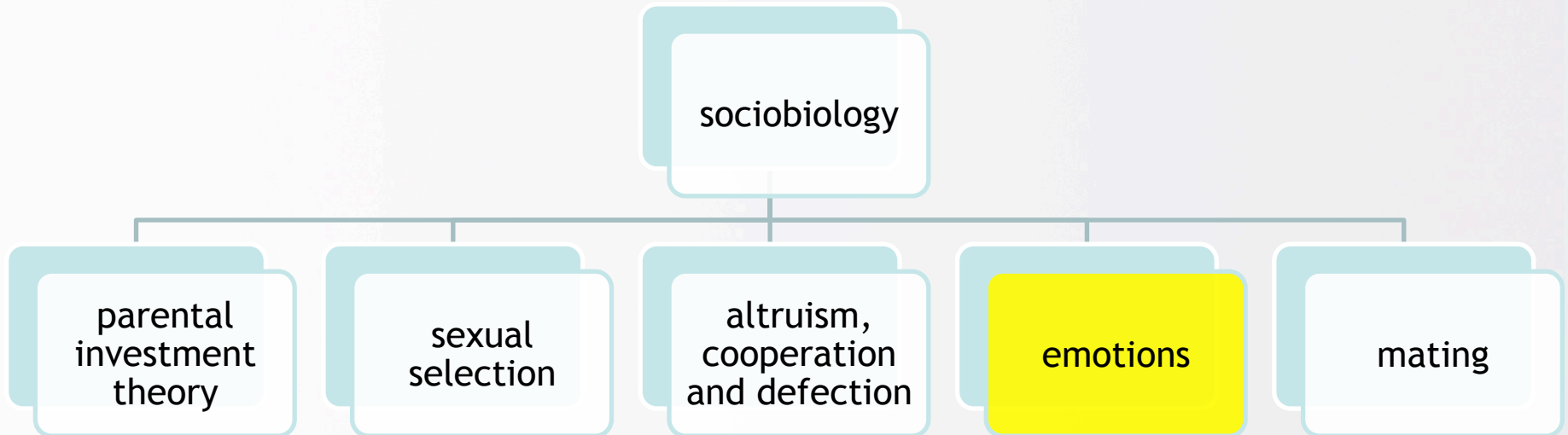
Sociobiology



- **Altruism** = unselfish concern of oneself for the welfare of another
 - eg. risking own life to save someone else
- **Kin-Directed Altruism**
 - individuals who display altruistic behaviour are less likely to have children, BUT altruistic genes can be selected for through natural selection
 - natural selection does not favour mere reproductive success but rather inclusive fitness
 - **Inclusive Fitness** → reproductive success of those who share common genes
 - the unit of selection is the GENE not the individual
 - organisms share genes with their relatives and will sacrifice themselves to help their relatives
 - the genes survive in the relatives and can then be passed on
 - i.e. parents are more likely to be altruistic towards their offspring
 - natural selection favours this type of altruism because organisms who share genes help each other survive

- **Reciprocal Altruism** → people behave altruistically toward a non-relative with confidence that these acts will be reciprocated if they are in need
 - gain obtained from cooperation is greater than the sum of the gain obtained by each party without cooperation
 - defection (non-cooperation) usually produces the highest payoff in the short term and cooperation produces a higher payoff in the long term

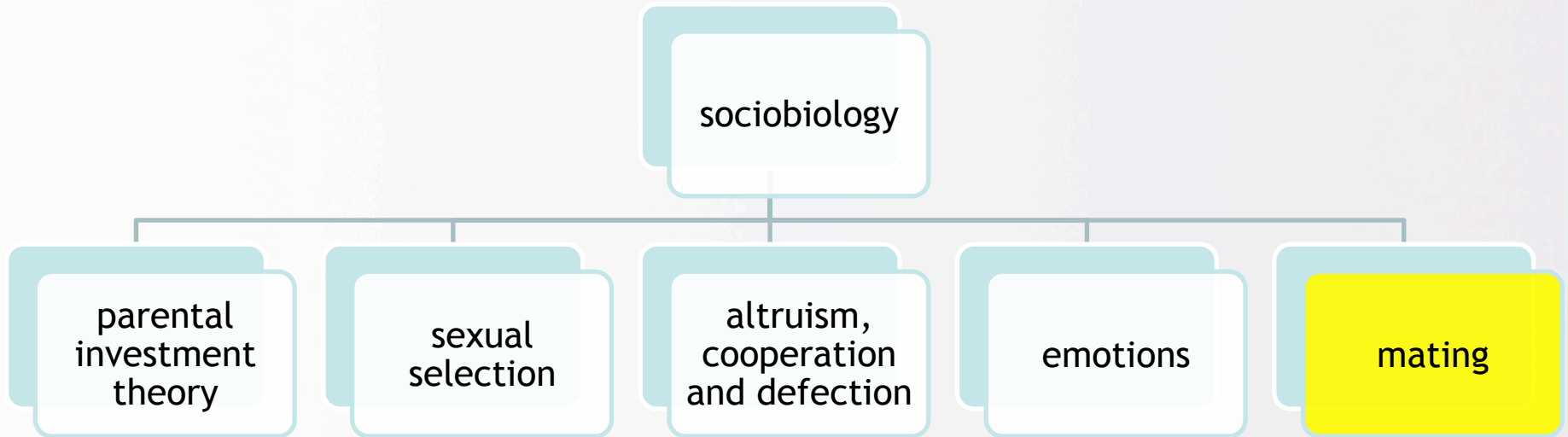
Sociobiology



- emotions are likely adaptations to different reproductive and survival problems in the past
- Ekman proposed six basic human emotions: surprise, happiness, anger, fear, disgust, sadness
 - Emotions tested cross culturally
 - i.e. New Guineans could identify these emotions in American people and vice versa

- **Jealousy** is an evolved emotion - has different functions in men and women because men and women faced different reproductive problems in the past
 - number of offspring produced by a female is limited by pregnancy and menopause
 - women compete among themselves for men with resources to help raise offspring
 - number of offspring produced by a male is limited to the number of fertile women with whom he mates
 - men compete for mating opportunities
 - problem faced by men: knowing if their offspring are theirs
 - Due to this, women's sexual jealousy focuses on her partner's **emotional commitment** to her
 - men's sexual jealousy focuses on his partner's **sexual fidelity**

Sociobiology



- 4 types of reproductive strategies = different systems of mating and rearing offspring
 - Polygyny
 - Monogamy
 - Polyandry
 - Polygynandry
- Mate selection decisions are generally based on **parental investment**
- competition for mates leads to sexual selection

| | male partner | | |
|----------------|--------------|-----------------|---------------------|
| | | one | multiple |
| female partner | one | <i>monogamy</i> | <i>polyandry</i> |
| | multiple | <i>polygyny</i> | <i>polygynandry</i> |

- **Polygyny** - high female, low male parental investment
 - eg. humans and most mammals
 - females have fewer opportunities to reproduce, carry fetus in body, assume risks of pregnancy, nurse infant
 - Men limited by access to females
- **Monogamy** - shared parental investment
 - eg. both male and female foxes hunt and protect their cubs
 - strong tendency for most monogamous species to tend toward polygynous behaviour

- **Polyandry** - high male, low female parental investment
 - rare among humans, non-existent in other mammals
 - eg. remote Himalayan villages - several brothers share the same wife to prevent dissolution of the farm
- **Polygyandry** - group parental investment
 - eg. primates living in colonies such as chimpanzees
 - no barriers placed on which female mates with which male
 - males **don't know which offspring belong to them** - in their best interest to help rear and protect all offspring

evolutionary
psychology

natural selection

common
misunderstandings

sociobiology



Practice MC Question!

The individual who tends to be more selective or discriminating when choosing a mate is generally the

- a. male
- b. individual who will make the greater parental investment
- c. individual who will make the smaller parental investment
- d. individual who will have the most opportunities for mating
- e. None of the above

b.



Practice MC Question!

Which of the following statements is true?

- a. In polygynous species, males invest more in offspring than females do.
- b. In mammals, male reproductive success is limited only by their access to the other sex.
- c. In humans, the costs associated with reproduction are greater for males than for females.
- d. Compared to females, males generally have fewer opportunities to reproduce.

b.

Explain how altruistic genes can be selected for in a population, despite the fact that displaying altruism can result in death?

- natural selection doesn't just favour reproductive success - it favours **inclusive fitness**
 - **inclusive fitness** → reproductive success of those who share common genes
- thus, the unit of selection is the gene, not the individual
- organisms sharing genes are more likely to help each other than organisms who don't share genes
 - genes survive in these relatives and still get passed on to future generations
 - i.e. Parents are altruistic towards children, hoping that children will pass on their genes



Motivation & Emotion

Motivation & Emotion

Motivation & Emotion

motivation
& emotion

What is
motivation?

eating

sexual
behaviour

emotion

What is motivation?

What is
motivation?

mechanisms

physiology of
reinforcement

theories

perseverance

What is motivation?

- Motivation → group of phenomena that affect the nature, strength and persistence of an individual's behaviour
 - desires, needs and interests that arouse and activate an organism to move towards a specific goal
 - Examples of motivated/drive behaviours - eating, sexual behaviour, aggression



What is motivation?

- **Intrinsic Motivation** = motives that result from an **internal need**
 - eg. volunteering at a shelter to feel good about making a difference in the community
- **Extrinsic Motivation** = motives based on getting a reward or avoiding an unpleasant consequence (**external desire**)
 - eg. volunteering at a shelter to get your 40 volunteer hours to graduate

What is motivation?

What is
motivation?

mechanisms

physiology of
reinforcement

theories

perseverance

What is motivation?

- Olds and Milner
 - showed that electrical stimulation of the brain could be reinforcing to rats
 - rats quickly learned that pressing a lever delivered a brief electrical current to their brain
 - stimulation of certain brain areas activates the same system that is activated by natural reinforcers and by drugs people abuse
 - all reinforcing stimuli trigger the release of dopamine in the brain
 - neural reward centres in the brain are:
 - medial forebrain bundle
 - nucleus accumbens of the basal ganglia

What is motivation?

What is
motivation?

mechanisms

physiology of
reinforcement

theories

perseverance

What is motivation?

theories

```
graph TD; A[theories] --- B[drive theory]; A --- C[optimum-level theory]
```

drive
theory

optimum-
level theory

What is motivation?

- we have physiological mechanisms that detect imbalances in needs
 - Regulatory Behaviours → bring physiological conditions back to normal
 - Homeostasis → way in which physiological characteristics are maintained at their optimum level
 - deficits/imbbalances motivate us to perform appropriate regulatory behaviours

What is motivation?

- regulatory system has four essential features:
 - System Variable - what is being regulated
 - Set Point - optimum value of the system
 - Detector - monitors the value of the system variable
 - Correctional Mechanism - restores the system variable to the set point
 - System Variable → Set Point → Detector → Correctional Mechanism → Set Point
- Negative Feedback - effect produced by an action serves to diminish or terminate that action
- example of a regulatory system:
 - system variable = air temperature
 - set point = temperature setting
 - detector = thermostat
 - correctional mechanism = heater
 - negative feedback = heat production from heater feeds back to the thermostat, which causes it to turn the heater off

What is motivation?

- **Drive Theory:**

- motivated behaviour results from an internal drive
 - a drive is a response to some need
 - eg. hunger drive, internal temperature drive
- reduction of drive is reinforcing - want to maintain ourselves at an optimal level of performance (homeostasis)

What is motivation?

- problems with Drive Theory:
 - many motivated behaviours cannot be explained by drive theory
 - eg. monkey will choose a tube with saccharin over sugar because it is sweeter, even though it has no nutritive value
 - drive is almost impossible to measure
 - many events that we experience as reinforcing are also drive increasing
 - eg. riding a roller coaster, watching a horror movie

What is motivation?

- Difference Between Drive Theory and the Incentive Model (rewards)
 - Incentive Model
 - Incentive → sweetened sports drink
 - Behaviour → drink fluids to experience incentive
 - Behaviour is to experience a reward
 - Drive Theory
 - Drive → Water deprivation leads to thirst
 - Behaviour → Drink fluids to reduce drive
 - Behaviour is to reduce internal drive

What is motivation?

theories

drive
theory

optimum-
level theory

What is motivation?

- **Optimum-level Theory:**
 - organisms will perform behaviour that restores the level of arousal to an optimum level
 - when arousal level is too high, less stimulation is reinforcing
 - when arousal is too low, more stimulation is desired
- **Two types of Exploration:**
 - Diversive Exploration - response to understimulation that increases the diversity of the stimuli that the organism interacts with
 - Specific Exploration - response to overstimulation that leads to the needed item
 - eg. overstimulation occurs in response to a particular need such as lack of food

What is motivation?

What is
motivation?

mechanisms

physiology of
reinforcement

theories

perseverance

What is motivation?

- **Perseverance** → tendency to continue to perform a behaviour even when it is not being reinforced
- **Intermittent Reinforcement**
 - behaviour acquired through intermittent reinforcement is more resistant to extinction than behaviour acquired with continuous reinforcement
 - succeeding after several failures causes the learner to keep trying after many failures

What is motivation?

- **Overjustification Hypothesis**

- using extrinsic rewards to motivate intrinsically motivated behaviour will weaken the target behaviour
- using extrinsic rewards shifts the motivation from intrinsic to extrinsic, producing a loss of intrinsic behaviour
 - what happens when extrinsic rewards are gone?
- eg. children who had previously received a reward for drawing pictures played less with the drawing supplies than those who didn't receive a reward for drawing

What is motivation?

• Achievement Motivation

- **Outcome Expectations** → how much do we want the outcome
- **Efficacy Expectations** → can we actually carry out the behaviour in order to get the outcome
- Efficacy is a better motivator than outcome
 - **Stable ability** → outcome is independent of behaviour
 - Leads to less effort, because people think hard work won't change abilities that are static i.e. "you are smart"
 - Similar to Learned Helplessness (next slide)
 - **Incremental ability** → outcome is dependent on behaviour
 - leads to increased effort, since people infer that if they work harder they can increase their performance even more i.e. "keep working hard"

What is motivation?

- **Learned Helplessness**

- learning that the consequences of behaviour are independent of one's behaviour
 - i.e. behaviour does not affect outcomes
- Loss in motivation occurs because they learn they don't have power to affect their future
 - eg. dogs that had previously received inescapable shocks were unable to learn how to avoid the shock in a new apparatus

Motivation & Emotion

motivation
& emotion

What is
motivation?

eating

sexual
behaviour

emotion

eating

What starts
a meal?

What stops
a meal?

- motivation to eat is aroused when there is a deficit in the body's supply of stored nutrients
 - is satisfied by a meal that replenishes this supply
- physiological factors:
 - stomach cues - “hunger pangs” caused by contraction of the stomach signal hunger
 - not true because people still have hunger pangs even when the stomach is removed

- blood glucose levels (glucostatic hypothesis)
 - glucose is used by cells for energy
 - decreasing glucose levels leads to hunger - occurs when glycogen in short-term reservoir has been depleted
 - injecting glucose in liver alleviates hunger
 - problem: diabetics still feel hungry even though their glucose levels do not decline normally
- fat levels
 - body also monitors levels of fat stores
 - monitor level of hormone (leptin) that is secreted from the fat cells
- brain mechanism
 - arcuate nucleus is the “appetite control centre”
 - contains two types of neurons: one stimulates feeding behaviour, the other oppresses feeding behaviour

- Sociocultural factors that affect eating
 - meal time - we eat three times a day out of habit, not necessarily because we are hungry
 - we have learned “when” to eat
 - social factors - eat more when we are around other people who are eating
 - aesthetics - eat more good-tasting and pretty food, as opposed to bad-tasting and ugly food
 - being on a diet - people think that might as well eat a lot if they have already “blown” their diet
 - pleasure - some foods are very rewarding

eating

What starts
a meal?

What stops
a meal?

- **Physiological Factors**

- those that arise from the immediate effects of eating a meal:
 - stimulation of receptors by a “swollen” stomach
 - detectors that inform the brain about the chemical nature of the food in the stomach
 - eating is suppressed if food was nutritious, but continues if food was not very nutritious
 - intestines and liver contain receptors that detect nutrients
- those that are produced by long-term consequences:
 - tissue that stores fat produces signals
 - leptin is secreted by fat cells that have absorbed a lot of fats and acts to inhibit hunger

Motivation & Emotion

motivation
& emotion

What is
motivation?

eating

sexual
behaviour

emotion

Sexual Behaviour

sexual
behaviour

sex
hormones

sexual
orientation

Sexual Behaviour

- sex hormones secreted by the testes and ovaries have effects on cells of the body
 - sex hormones do not CAUSE behaviours - they PROMOTE behaviours
 - they affect people's motivation to perform reproductive behaviours
- **Organizational Effect** → effect of a hormone that occurs during prenatal development and alters the organization of the sex organs and brain
- **Activational Effect** → effect of a hormone that activates sex organs and brain circuits that have already developed

- effects of androgens
 - increased interest in sexual behaviour
 - providing artificial testosterone affects male sexual performance
 - placebo also produced some of the same affects - interest is affected by physiological factors
- effects of progesterone and estradiol
 - influence a woman's sexual interest
 - sexual activity initiated by women is highest around the time of ovulation, when estradiol levels are highest



```
graph TD; A[sexual behaviour] --- B[sex hormones]; A --- C[sexual orientation];
```

**sexual
behaviour**

**sex
hormones**

**sexual
orientation**

Sexual Behaviour

- conclusions of study on sexual orientation:
 - determined prior to adolescence and prior to homosexual or heterosexual activity
 - most homosexual men and women have engaged in some heterosexual experiences during childhood and adolescence
 - strong relation between gender non-conformity in childhood and development of sexuality
- homosexuality is at least partly determined by **biological factors**
 - prenatal hormones and chemicals play a role
 - homosexual men were more likely than heterosexual men to have older biological brothers
 - more monozygotic twins are concordant for dizygotic twins for homosexuality

Motivation & Emotion

motivation
& emotion

What is
motivation?

eating

sexual
behaviour

emotion

Emotion

emotion

theories

brain
mechanisms

culture &
emotion

- **Emotion** → behaviours, physiological reactions and subjective feelings that accompany motivated behaviour
- emotional reactions have three components:
 - 1) behavioural - muscular movements appropriate to the situation that elicits them
 - 2) autonomic - heart rate, dilation of arteries, rate of respiration
 - 3) hormonal - secrete hormones

- **James-Lange Theory**

- emotional response occurs after the autonomic nervous system response
 - ANS → Emotional Response
- each emotion has its own specific pattern of ANS arousal
 - eg. seeing a friend after a long time triggers an ANS response, which the brain interprets as happiness
- observe our own behaviour, and based on that information, attribute emotion to ourselves
- problems:
 - increasing ANS activity by drugs does not always cause emotion
 - some emotions occur before ANS response
 - still experience emotion even if peripheral nerves are cut

- **Cannon-Bard Theory**

- brain controls emotion
- ANS response is only coincidental to the emotion
- believe physiological changes occur too slowly to trigger an emotional response
- also not aware of all of the physiological reactions occurring in our body
 - eg. bile being released from gall bladder

- **Schachter's Two-Factor Theory**

- label our ANS responses cognitively
- emotion given to the state of arousal depends on the situation we are currently in
 - eg. same ANS responses to fear and sexual desire - feel emotion of fear in front of a tiger, and sexual desire in front of an attractive person

- **Facial Feedback Theory**

- coaching people to show an emotional expression, causes them to produce physiological signs consistent with that emotion
 - eg. people feel happier after showing their teeth

Emotion

emotion

theories

brain
mechanisms

culture &
emotion

- **Amygdala**

- removing the amygdala in monkeys interfered with ability to process psychological significance of stimuli
 - eg. monkeys did not show anger to objects that had previously angered them
- people with damage to the amygdala show inappropriate emotional responses

- **Prefrontal Cortex**

- plays a role in the conscious experience of emotions
- right hemisphere activity increases during presentation of stimuli evoking negative emotional responses; left hemisphere activity increases with stimuli likely to evoke positive emotional responses

Emotion

emotion

theories

brain
mechanisms

culture &
emotion

- social nature of emotion
 - women either described an experience to another female, or alone
 - when alone, there was a good correspondence between emotional experience they were describing and facial expression
 - however, individuals showed even MORE positive expression when telling another female about the experience
 - social setting amplifies emotion - facial expressions also serve as communication

- universality of emotional expression
 - Ekman showed the tribespeople in New Guinea could identify the emotional expressions of Westerners as accurately as they could identify them of her own people
 - some argue expressions may not be emotional signals, but social tools used for communication
 - eg. communicate happiness by a smile, but the smile may be generated by social cues instead of emotion
 - members of some cultures recognize certain emotions accurately because these emotions are more important to them
 - eg. Asian Americans reported fewer pleasant emotions than did North Americans

Motivation & Emotion

motivation
& emotion

What is
motivation?

eating

sexual
behaviour

emotion



Practice MC Question!

That you seek an alternative activity when you are bored by a present one and seek rest when you are tired would be best predicted by psychologists who subscribe to the _____ theory.

- a. need
- b. drive reduction
- c. incentive
- d. optimum-level

d.



Practice MC Question!

When you have a flu virus your body often heats itself up (ie. you get a fever) with the goal of killing the virus that has caused the fever to originate in the first place. Relating this concept to what you learned about homeostatic mechanisms, this process would be called _____.

- a. negative feedback
- b. self-defeating
- c. detector correctional mechanism
- d. learned helplessness

a.

Practice Short Answer Question!

- Explain the difference between the two theories of drive reduction
- Drive Theory:
 - motivated behaviour results from an internal drive
 - a drive is a response to some need
 - eg. hunger drive, internal temperature drive
 - Motivation is to maintain homeostatic balance
- Optimum-level Theory:
 - organisms will perform behaviour that restores the level of arousal to an optimum level
 - when arousal level is too high, less stimulation is reinforcing
 - when arousal is too low, more stimulation is desired
- Two types of Exploration:
 - Diversive Exploration - response to understimulation that increases the diversity of the stimuli that the organism interacts with
 - Specific Exploration - response to overstimulation that leads to the needed item
 - eg. overstimulation occurs in response to a particular need such as lack of food



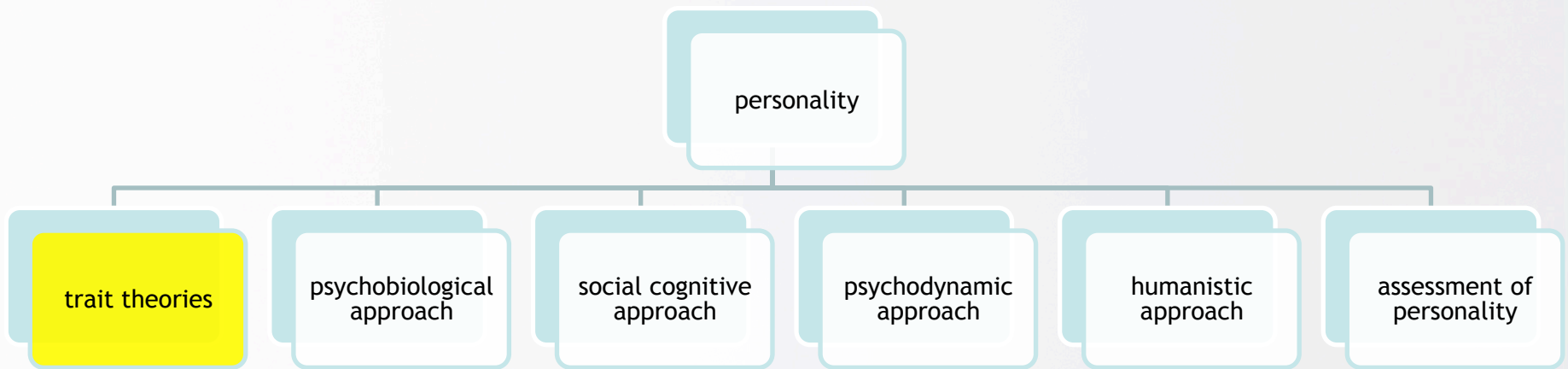
Personality

Personality

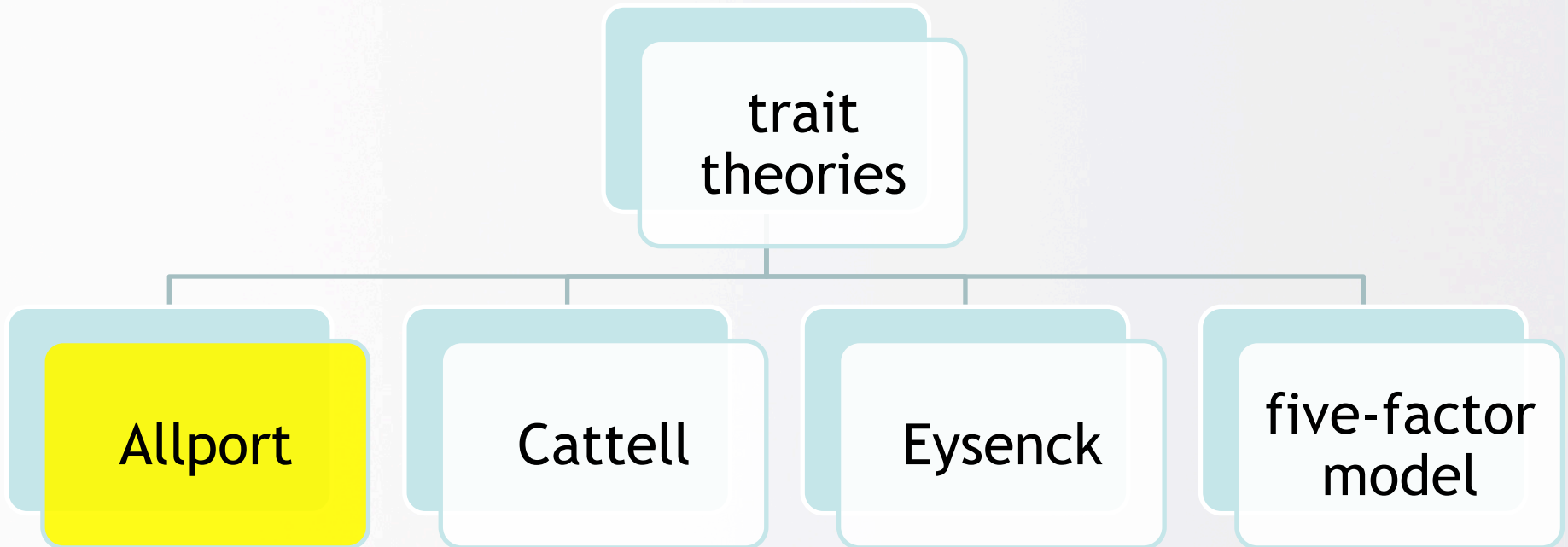
Personality

- **Personality** → pervasive pattern of thoughts and behaviours that persists across time and situations, that differentiates one person from another
 - ie. consistent patterns of thoughts, feelings and behaviours that characterize an individual
- **Personality types** → different categories into which personality characteristics can be assigned based on factors
 - eg. people are either tall or short
- **Personality trait** → enduring personality characteristic that reveals itself in a particular pattern of behaviour in different situations
 - eg. people vary in the extent to which they are extroverted or introverted
 - Traits are on a continuum

Personality



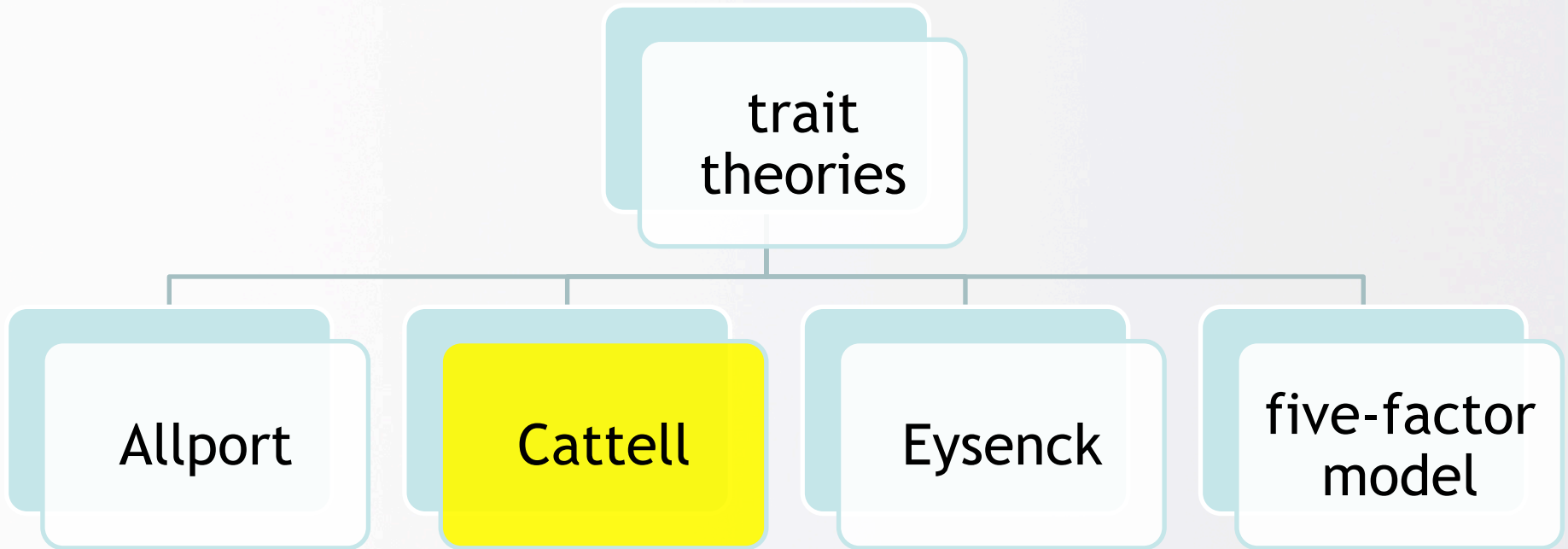
Trait Theories



Trait Theories

- Allport found 18 000 words in the dictionary that described personality
- Developed **3 types of traits**, which vary in relevance to an individual's personality
 - Cardinal Traits → most powerful, rare
 - eg. Hitler's oppressive power
 - Central Traits → less influential than cardinal traits, but capture important characteristics
 - eg. a person is honest
 - Secondary Traits → minor influence on consistency of behaviour
 - eg. a person's tendency to change jobs frequently

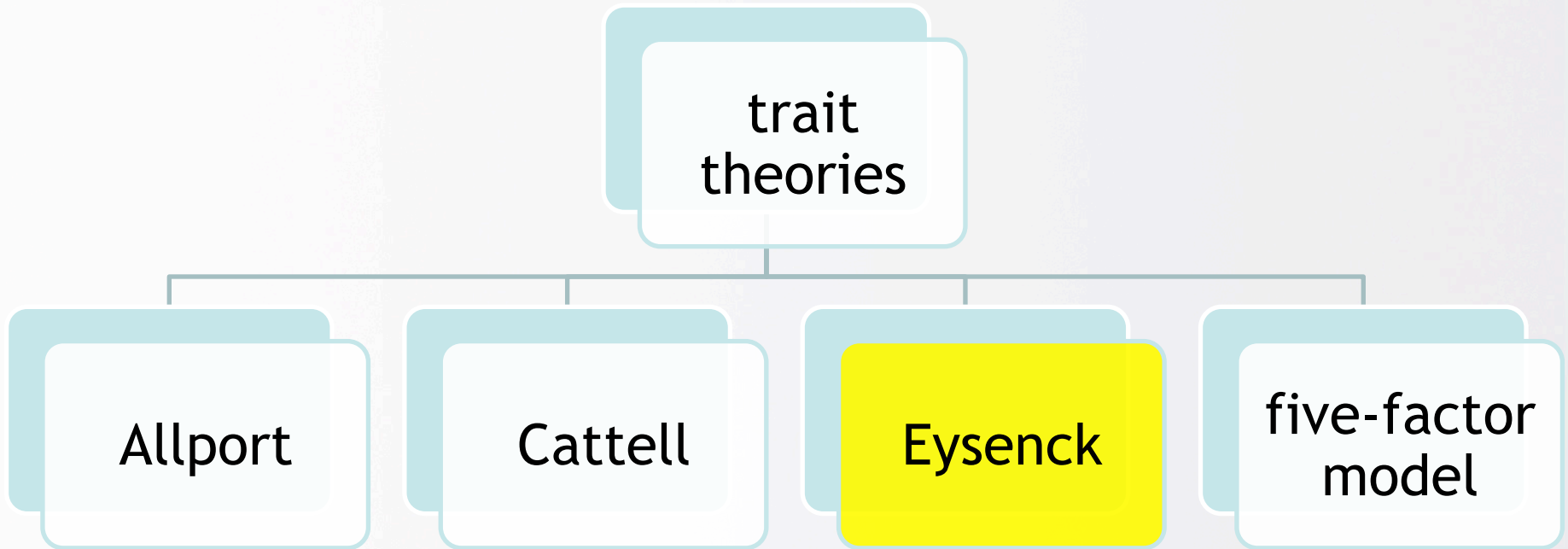
Trait Theories



Trait Theories

- Cattell narrowed Allport's 18 000 words down to 171 adjectives
- then used factor analysis to identify clusters of these traits that represented underlying traits
- identified 16 factors, which he called source traits

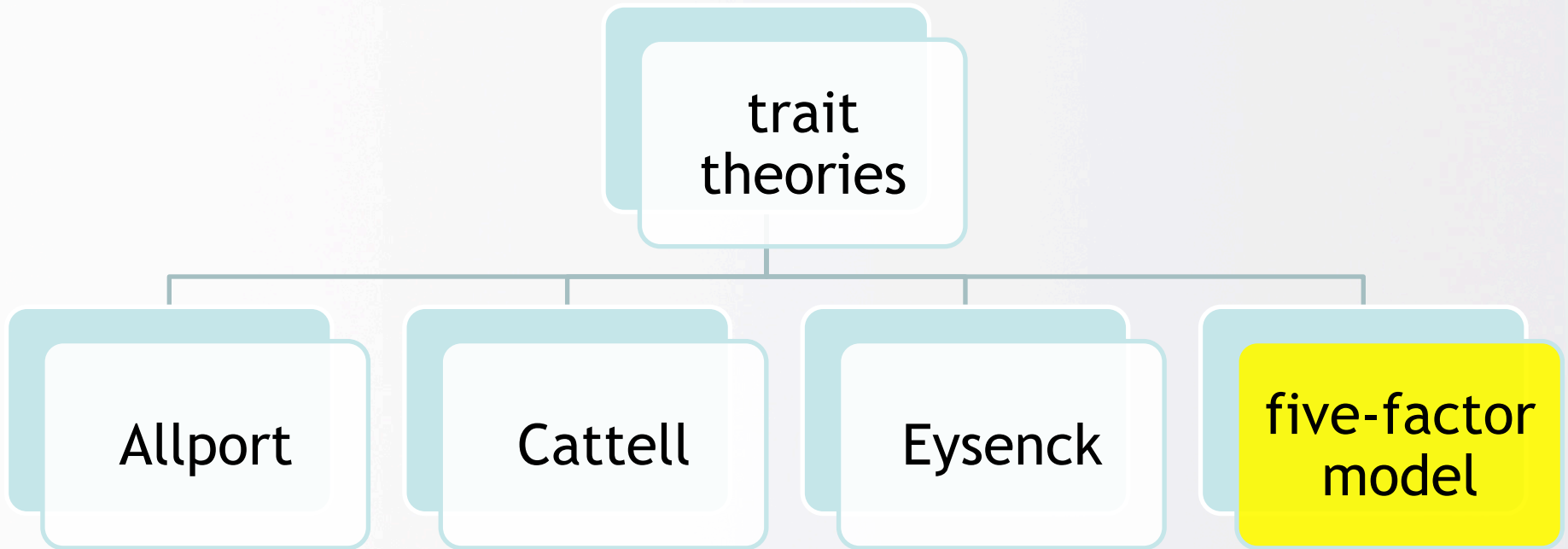
Trait Theories



Trait Theories

- Eysenck identified three factors:
 - Extroversion vs Introversion
 - extroversion = outgoing, high level of activity
 - Neuroticism vs Emotional stability
 - neuroticism = worried, guilty, moody, unstable
 - Psychoticism vs Self-control
 - psychoticism = aggressive, egocentric, anti-social
- personality is a combination of psychoticism, extroversion and neuroticism
- PEN Model

Trait Theories

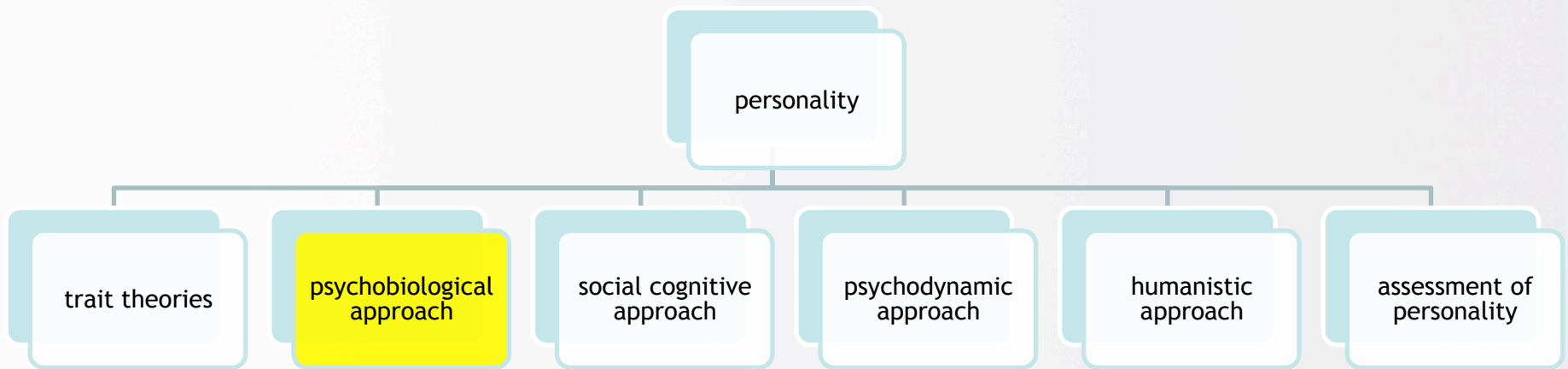


Trait Theories

- **Five Factor Model**
- proposes personality is composed of five primary dimensions: **(OCEAN)**
 - **O - openness**
 - Open to new experiences, play instruments, less racist
 - **C - conscientiousness**
 - live longer, healthier, better grades, sexually faithful
 - **E - extroversion**
 - Outgoing, high activity level, attend more parties, popular, leaders
 - **A - agreeableness**
 - higher grades, fewer behavioural problems
 - **N - neuroticism**
 - Anxiety, emotional stability pay attention to negative, can be distressed, less satisfied
- measured on the NEO-PI-R using 240 questions rated on a scale of 1 to 5
 - self ratings agree well with ratings by family members

- Dark Triad - special cluster of traits that underlie socially offensive personalities (like criminals)
 - Machiavellianism - skill at manipulating others socially
 - Psychopathy - lack of empathy for others and a high degree of impulsivity
 - Narcissism - grandiosity and feelings of superiority
 - Example → Hannibal Lecter

Personality



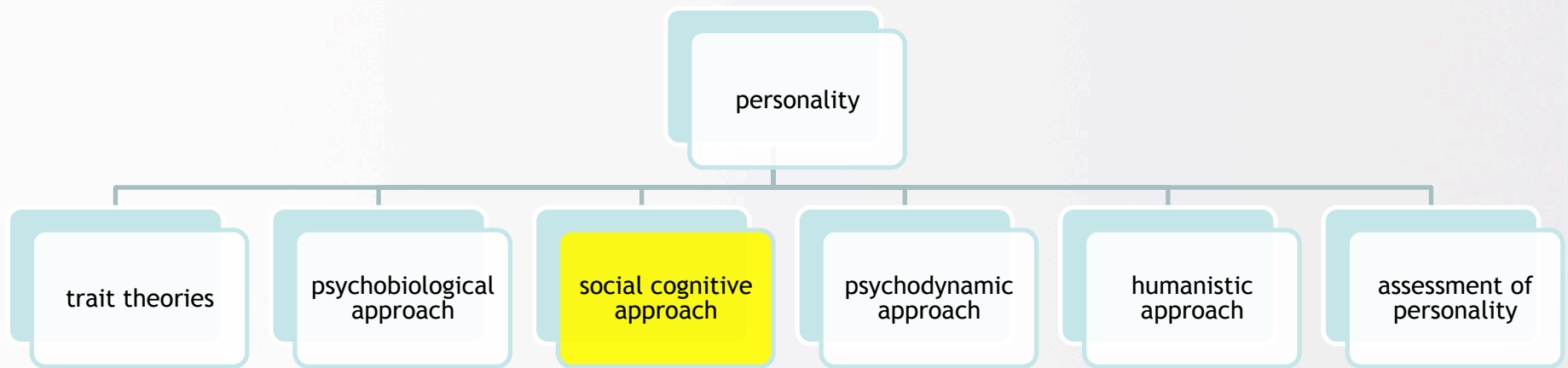


Psychobiological Approach

- some personality traits are strongly heritable
 - identical twins are more similar than fraternal twins on many personality measures
- extroversion, neuroticism, psychoticism are strongly affected by genetic factors
 - little evidence of an effect of common family environment (identical twins raised together were not much more similar than those raised apart)
 - individual's environment is strongly affected by heredity factors
 - individual has genes that cause them to interact with the environment a certain way and to be treated a certain way

- extroversion, neuroticism and psychoticism are determined by the neural systems response for reinforcement, punishment and arousal
 - Extroversion - high sensitivity to reinforcement
 - Neuroticism - high sensitivity to punishment
 - Psychoticism - low sensitivity to punishment; high optimum level of arousal

Personality



- Albert Bandura
- **Social Cognitive Approach** - both the consequences of behaviour and an individual's beliefs about those consequences determine personality
 - social behaviours are important for shaping the behaviours and thoughts that make us unique
- Bandura combined elements of learning theory with cognitive concepts to explain social behaviour

- **Observational learning** → learning by watching the consequences models receive for their behaviour
 - we watch certain behaviours being reinforced in other individuals, so we perform these behaviours with those outcomes in mind
- sometimes learning comes by simply imitating others
 - Expectancy → belief that a certain action will produce a certain consequence
 - eg. boy hits his sister to get a toy from her - after he has been caught by his parents, his expectancy changes - now he may no longer hit her because he knows he may get in trouble

Social Cognitive Approach

- **Reciprocal Determinism** = behaviour, environment, and person variables interact to determine personality
 - our actions affect the environment
 - environment can affect our behaviour
 - thoughts affect the way in which we behave to change the environment
 - i.e.
- **Self-Efficacy** = people's beliefs about how well or badly they will perform tasks
 - determines whether people will engage in a particular behaviour
 - determines the extent to which we will keep trying at a task when things get tough
 - eg. unlikely to apply for a job if you think you are not qualified - however, likely to apply for a job if you think you are qualified, and to continuing applying to the same types of jobs even if you don't get the first one

- **Situationism** = behaviours that make up our personality are specific to a given situation and not the result of any persevering traits
 - eg. drive carefully with parents in car, drive aggressively with friends in car
 - no persevering trait for conscientiousness here!
- **Person variables** (Mischel) = individual differences in cognition that account for differences in personality
 - competencies, encoding strategies, expectancies, subjective values, self-regulatory systems and plans
- people's thoughts and behaviours are undergoing constant change as they interact with the environment
 - new plans are made; people adjust their actions according to their competencies, values and expectancies

- **Locus of Control (Rotter) = belief that one's actions are controlled by internal, personal variables OR by external, environmental variables**
 - **Internal locus of control - believes rewards are dependent on his own behaviour**
 - eg. “I failed the test because I didn't study at all”
 - will work harder to overcome obstacles
 - more likely to be healthy
 - do well in school
 - **External locus of control - see life as being controlled by external forces unaffected by own behaviour**
 - eg. “I failed the test because the teacher made it really hard, there was nothing I could have done”
 - Won't work as hard to overcome obstacles

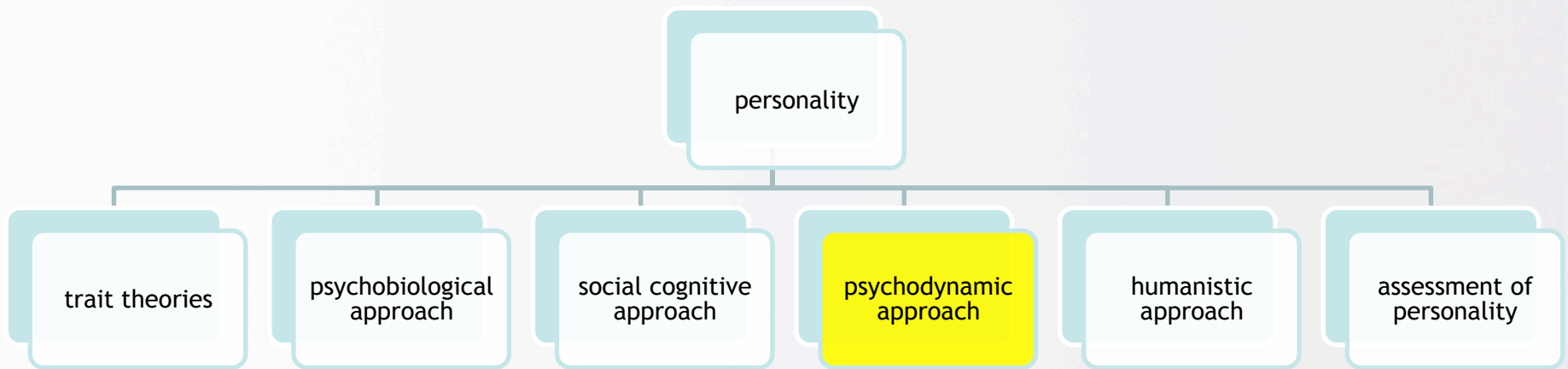


Social Cognitive Approach

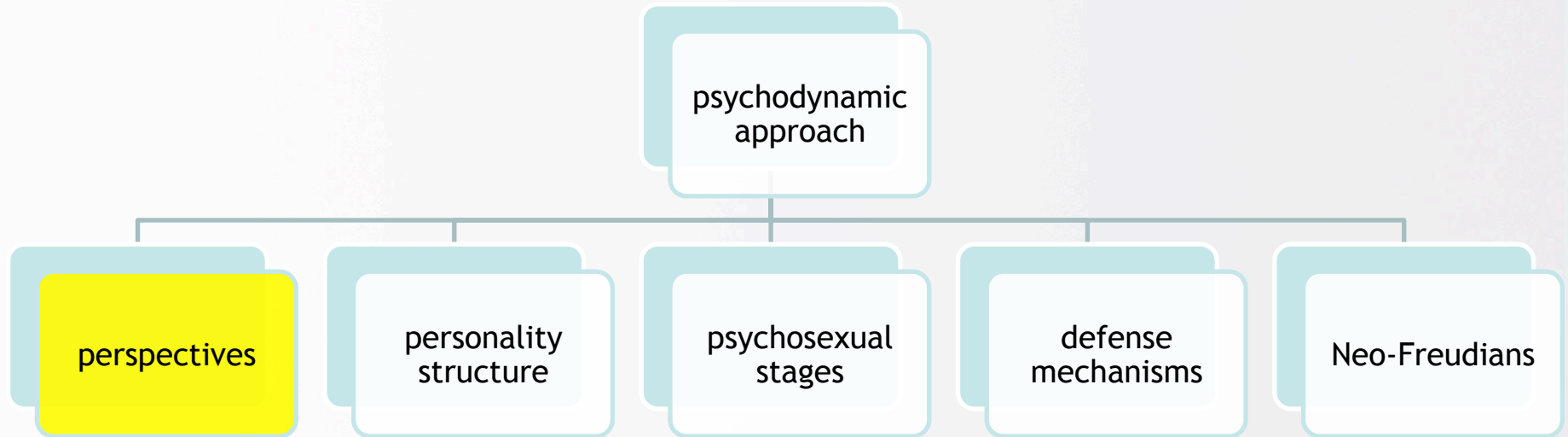
- **Optimism**

- people are generally more successful when they believe in themselves and their abilities
- maladaptive optimism does exist
 - believing you are invulnerable to disease or disaster can lead you to take unnecessary risks
 - believing too strongly that you will perform well may lead you to not prepare as thoroughly as you could have
 - i.e. not studying for an exam because you're certain you'll ace it

Personality



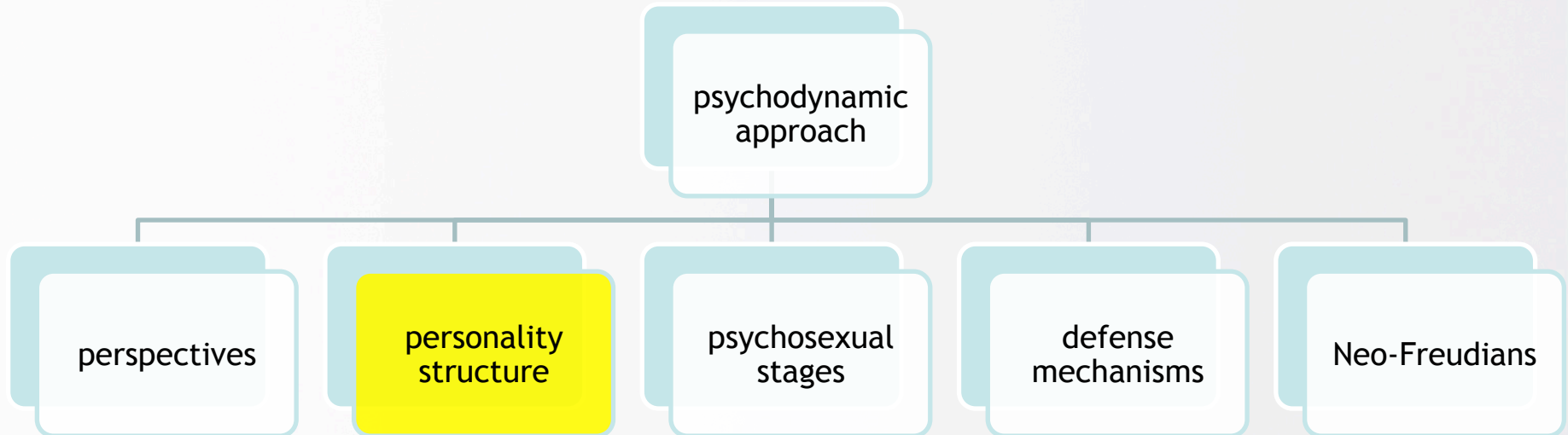
Psychodynamic Approach



Psychodynamic Approach

- Sigmund Freud
- **Psychodynamic Approach** → mind is in a state of conflict among instincts, reasons and conscience
 - what we do is often irrational and the reasons for our behaviour are seldom conscious
- all human behaviour is motivated by instinctual drives which create “psychic energy” when activated
 - this energy is aversive because the nervous system seeks a state of quiet equilibrium
 - Has to channel psychic energy somewhere
- traumatic events threaten the state of psychic energy equilibrium
 - hiding emotions suppresses the psychic energy and embeds the emotions in the unconscious part of the mind
 - mind prevents unconscious from entering conscious by repressing traumatic memories

Psychodynamic Approach



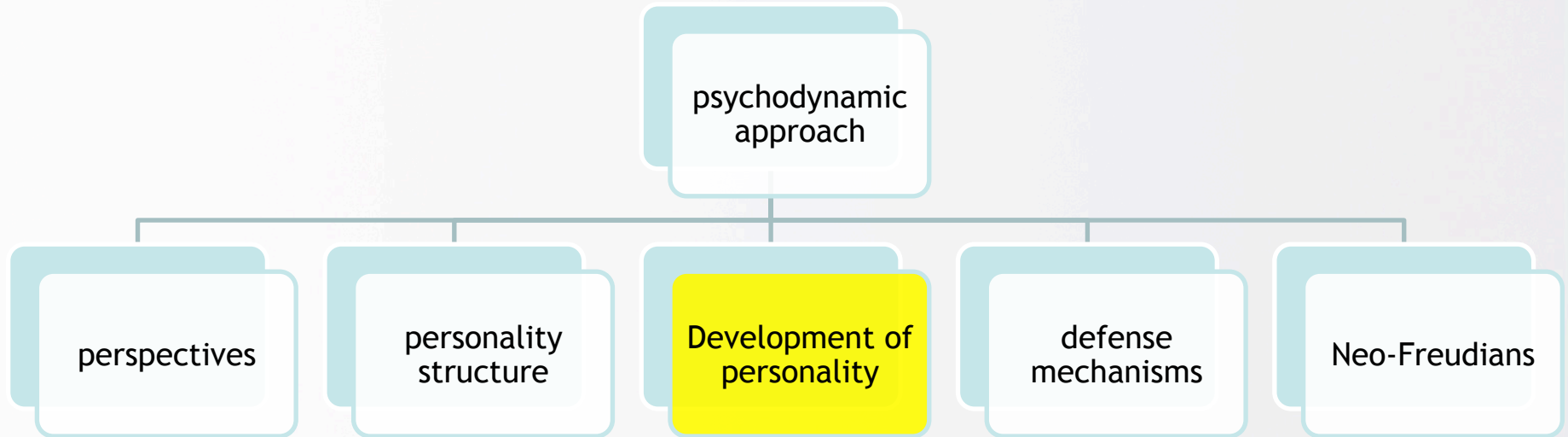


Psychodynamic Approach

- mind consists of 3 parts:
 - 1) Unconscious - mental events we aren't aware of
 - 2) Conscious - mental events we are aware of
 - 3) Preconscious - mental events that may become conscious through effort

- divided the mind into 3 structures:
 - 1) **Id** - completely unconscious
 - contains libido → primary source of motivation, unresponsive to demands of reality
 - obeys the Pleasure Principle - obtain whatever it wants by whatever it takes
 - 2) **Ego** - thinking, planning and protective self
 - acts as a mediator between the pressures of the id and the counterpressures of the superego
 - driven by Reality Principle - satisfies the id's demands realistically, which involves compromising
 - 3) **Superego** - divided into two parts
 - conscience - internalization of the rules of society
 - ego-ideal - internalization of what society values and what the person wants to be

- Freud believed dreams came from repressed wishes and urges (dream analysis)
 - **Manifest content** - apparent storyline of a dream
 - eg. co-worker switches jobs, removing competition for a promotion
 - **Latent content** - hidden message of the dream, produced by the unconscious
 - eg. dreamer actually has aggressive feelings towards the co-worker with whom he is competing, actually wants to hurt the co-worker
- **Free Association** → individual relaxes and reports all thoughts, images and feelings that come to mind
 - Freud looked for patterns in the reports



- **Fixation** → failure to pass through an earlier stage of development
 - person has become attached to the erogenous zone of the earlier stage
 - eg. person fixated in oral stage will seek oral stimulation through smoking, drinking and eating

1. Oral stage (0-18 mos)

- pleasure centres on the mouth (sucking, tasting)
- undergratification comes from early weaning and causes over-dependency
- overgratification will lead to aggressive behaviours

2. Anal stage (18-36 mos)

- pleasure centres on bowel and bladder elimination
- harsh toilet training leads to fixation - adults will have a need for control
- praising/appropriate toilet training leads to feelings of accomplishment and capability

3. Phallic stage (3-6 yrs)

- pleasure centres on the genitals
- form strong, immature sexual attachments to the parent of the opposite sex
 - Males → Oedipus Complex
 - Females → Electra Complex
 - conflict is resolved through identification, when children turn attention to the same-sex parent
 - initial source of superego development



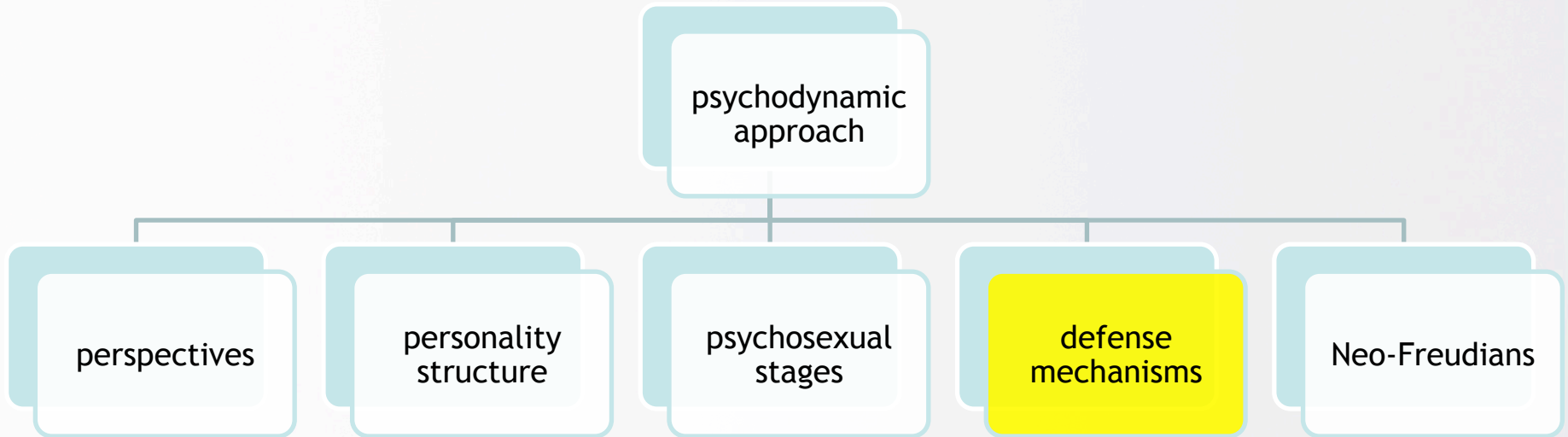
Psychodynamic Approach

4. Latency (6 yrs - puberty)

- ego and superego calm the id
- sexual feelings lay dormant
- energy directed towards social interaction

5. Genital stage (puberty on)

- maturations of sexual interests





Psychodynamic Approach

- **Defense mechanisms** → ways to prevent unacceptable or anxiety-producing thoughts from reaching conscious awareness
 - used when id's unconscious drives come into conflict with the superego's prohibitions
 - 6 types of defense mechanisms
 - Repression
 - Reaction Formation
 - Projection
 - Sublimation
 - Rationalization
 - Conversion

1) **Repression** → keeps anxiety-provoking memories from our conscious awareness

- eg. keeps childhood memories of assault repressed, so that the person doesn't live in fear

2) **Reaction formation** → replaces an anxiety-provoking idea with its opposite

- eg. person who is aroused by pornographic material becomes an advocate against pornography
 - this person can still look at porn, but not feel guilty by saying he is “educating” himself

3) Projection → deny one's own unacceptable desires and attribute them to others

- eg. a man feeling hostile attributes his feelings to a hostile world - when he becomes aggressive he has an “excuse”

4) Sublimation → redirect pleasure-seeking or aggressive instincts toward socially acceptable goals

- eg. person who feels strong sexual desire finds another outlet, such as art

5) Rationalization → justifies an unacceptable action with a more acceptable (but false) excuse

- eg. a man who buys a pornographic magazine says he buys it to read the articles, not look at the photos

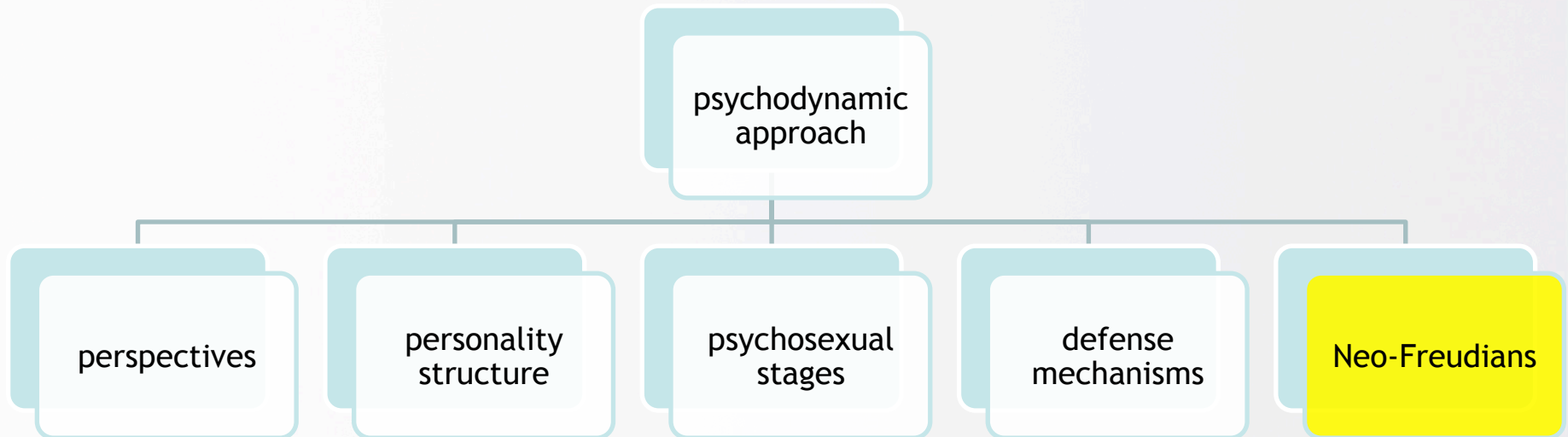
6) Conversion → convert an intrapsychic conflict into a physical form

- eg. a person develops blindness, deafness, paralysis or numbness because of a strong intrapsychic conflict

Psychodynamic Approach

- Classification of Defense Mechanisms
- **Immature Defenses** - distort reality most, lead to most ineffective behaviour
 - eg. projection, regression, displacement
- **Intermediate Defenses** - less distortion of reality and leads to somewhat more effective behaviour
 - eg. repression, reaction formation, sublimation
- **Mature Defenses** - least amount of reality distortion, associated with the most adaptive coping
 - eg. humour, suppression (conscious mind is aware of negative information, but does not let it overrun)

Psychodynamic Approach





Psychodynamic Approach

- **Carl Jung**

- de-emphasized the importance of sexuality
- libido was a positive creative force
- ego was totally conscious - contained ideas, perceptions, emotions, thoughts and memories that we are aware of
- collective unconscious = memories and ideas inherited from our ancestors
- archetypes = universal thought forms and patterns in collective unconscious
 - eg. all humans have had the same experiences with things such as mothers, evil, masculinity/femininity



Psychodynamic Approach

- **Alfred Adler**

- argued feelings of inferiority play the key role in personality development
- striving for superiority = major motivational force that comes from our need to compensate for our inferiority
- social interest = innate desire to contribute to society

- **Erik Erikson**

- emphasized social rather than biological aspects of personality development
- emphasized ongoing development throughout life - Freud emphasized development in childhood
- coined the term “identity crisis”



Psychodynamic Approach

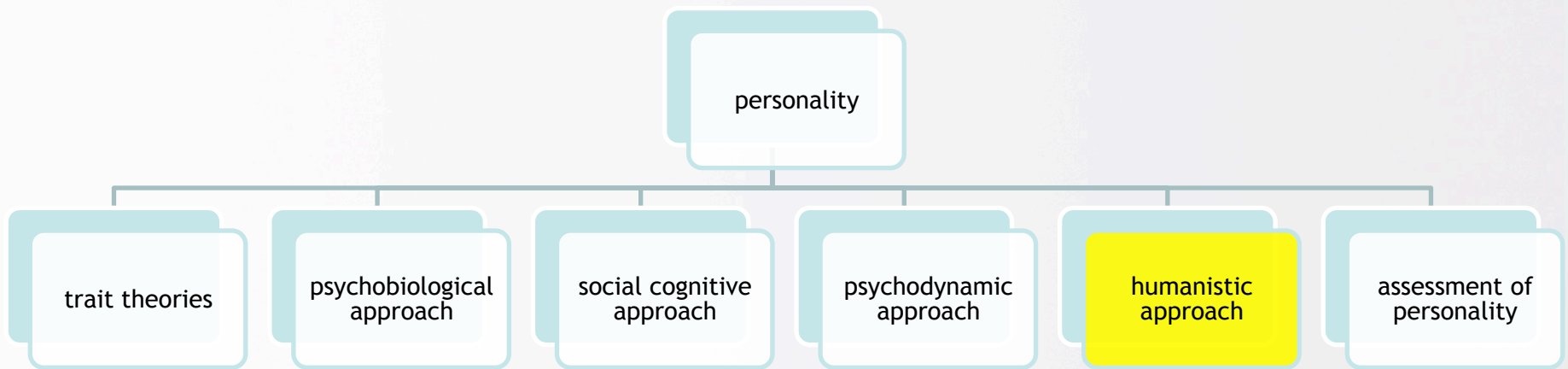
- **Karen Horney**

- did not believe sex and aggression are the primary shapers of personality
- agreed anxiety is a basic problem that must be overcome
- person has 3 options to deal with basic anxiety:
 - moving toward others - accept situation, become dependent
 - moving against others - resist situation, become aggressive
 - moving away from others - withdraw from others, become isolated
- 3 strategies correspond to three basic orientations:
 - Self-Effacing solution - moving towards, desire to be loved
 - Self-Expansive solution - moving against, desire to master oneself
 - Resignation solution - moving away from others, strive to be independent of others

- **Melanie Klein**

- felt psychodynamic battleground proposed by Freud occurred during infancy
- interactions between an infant and mother are so intense that they form the focus of the infant's structure of drives
- object-relations theory - personality is the reflection of the relationships that the individual establishes with the mother as an infant

Personality





Humanistic Approach

- Abraham Maslow and Carl Rogers
- **Humanistic Approach** → study of personality that emphasizes the positive, fulfilling elements of life
 - nurtures personal growth and life satisfaction
 - promotes positive human values
 - believe people are innately good and have an internal drive for self-actualization (realization of one's true intellectual and emotional potential)

Humanistic Approach

humanistic
approach

Maslow

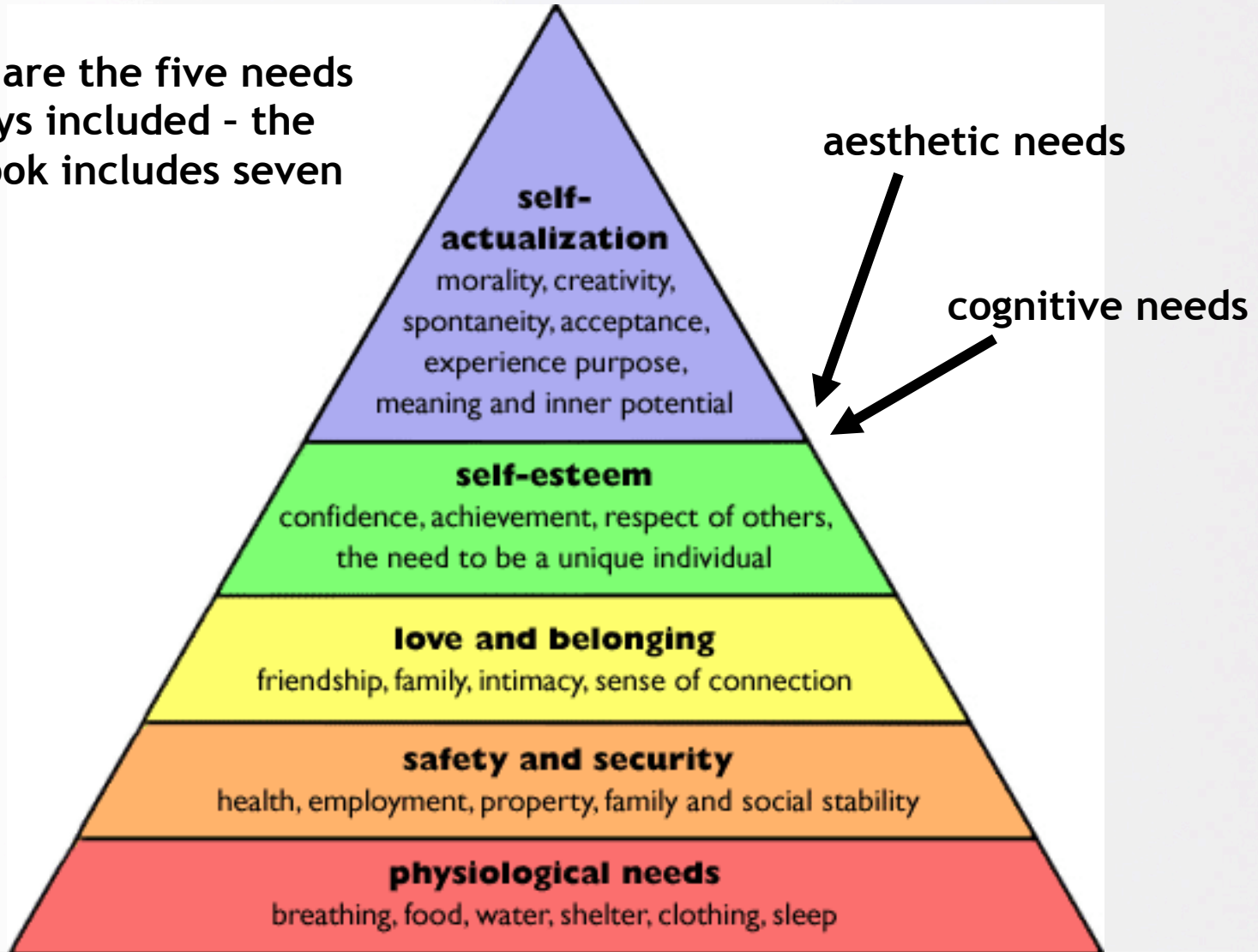
Rogers

Humanistic Approach

- people's behaviour stems from a motivation to reach their full potential
 - Known as **self-actualization**
- human motivation is based on a hierarchy of needs
 - people must satisfy basic needs before moving onto higher-level needs directed to self-fulfillment
 - motivated to achieve needs higher in the hierarchy only after first satisfying lower needs
- Maslow based his research on people who he believed to be self-actualized (i.e. Albert Einstein)

Humanistic Approach

*these are the five needs
always included - the
textbook includes seven



Humanistic Approach

humanistic
approach

Maslow

Rogers

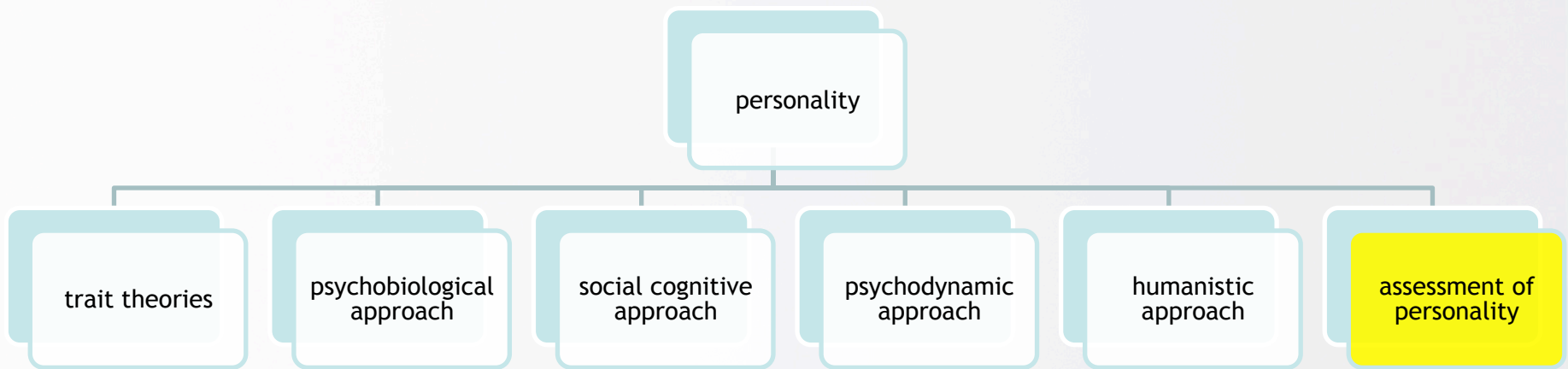
Humanistic Approach

- Rogers believed people are inherently good and have an innate desire to become better
- personality development centres on one's self-concept (one's opinion of self)
 - key to develop a healthy personality is to develop a positive self-concept
- all people have a need for positive regard (approval, warmth, love, respect and affection coming from others)

Humanistic Approach

- **Conditions of Worth** → conditions that others place on us for receiving their positive regard
 - negative effects if satisfying conditions of worth become the most important thing
- **Unconditional Positive Regard** → unconditional acceptance of an individual by another person
 - eg. parent can stop negative behaviour, but should not call kids name (“You’re a bad girl”)
 - if therapist gives unconditional positive regard, a client will reveal her true self (person she is now) as well as her ideal self (person she would like to be)

Personality



Assessment of Personality

assessment
of
personality

objective
tests

projective
tests



Assessment of Personality

- **Objective Test** → a personality test that can be scored objectively (without personal opinion)
 - eg. multiple choice, true/false tests
- **Minnesota Multiphasic Personality Inventory (MMPI)**
 - oldest, most widely used objective test
 - 567 true/false questions, 10 clinical scales (depression, paranoia, etc), 4 validity scales

assessment
of
personality

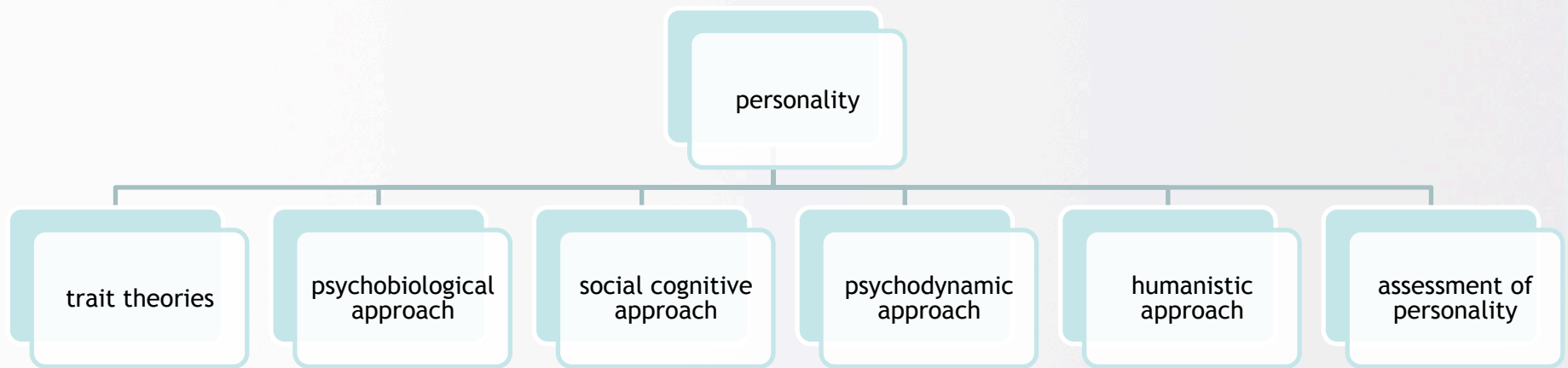
objective
tests

projective
tests

Assessment of Personality

- **Projective Test** → test to “look” into the unconscious - person given an ambiguous stimulus and told to interpret it
- **Rorschach Inkblot Test**
 - 10 pictures of symmetric ink blots
 - participant shown each card and asked to describe what it looks like and point out features he used to determine what he saw
- **Thematic Apperception Test (TAT)**
 - people shown a picture of an ambiguous situation and asked to tell a story about what is happening in the picture
 - presume participant “projects” himself into scene to make the stories reflect his needs

Personality





Practice MC Question!

Jamaal has made three attempts to pass the road test for his driver's license. He is now beginning to think that no matter what he does or how much he practices he will never get his license. Jamaal's view of his present situation would seem to fit Rotter's idea of _____.

- a. internal locus of control
- b. reciprocal determinism
- c. self-efficacy
- d. external locus of control

d.



Practice MC Question!

Which of the following statements is the most true?

- a. personality traits are stronger than situational variables in predicting behaviour
- b. personality traits and situational variables interact to determine behaviour
- c. situational variables are stronger than personality traits in predicting behaviour
- d. powerful situations have no impact on behaviour; rather, they impact cognition

b.



Practice Short Answer Question!

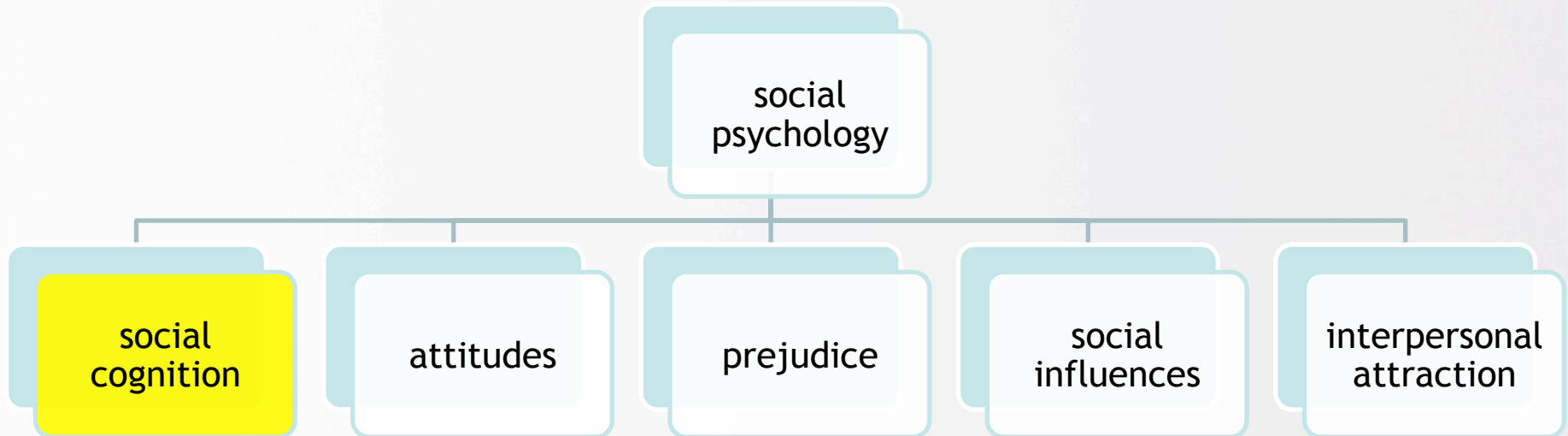
Describe the two techniques that Freud used in working with patients by means of the psychodynamic approach.

- Dream analysis - Freud believed dreams came from repressed wishes and urges
 - he looked for patterns in people's dreams
 - manifest content is the apparent storyline of the dream that is masking the latent content, or the hidden meaning of the dream that is produced by the unconscious
- Free association - patient relaxes and reports all thoughts, images and feelings that come to mind, no matter how vulgar or personal
 - Freud looked for patterns in what his patients were telling him in order to let him 'see' into their unconscious mind



Social Psychology

Social Psychology



social psychology = how the actual, imagined, or implied presence of others influences our thoughts, feelings and behaviours

Social Cognition

social
cognition

schemata

the self

attribution

social cognition = how people attend to, perceive, interpret and respond to the social world



Social Cognition

- **Impression Formation** → the way in which we integrate information about another's traits into a coherent sense of who the person is
- **Schema** → mental framework that organizes and synthesizes information about a person, place or thing
 - eg. schema for professors

- **Central Traits** → personality attributes that organize and influence the interpretation of other traits to a greater extent than do other traits
 - they give meaning to other known traits and suggest the presence of other traits
 - eg. positive view of someone who is “witty, smart and warm”; less positive view of someone who is “witty, smart and cold”
 - warm and cold are central traits!

Social Cognition

- **Primacy Effect** → tendency to form impressions of people based on the first information we receive about them
 - eg. if the first time you meet a firefighter, he tells you about a heroic rescue, you will come to always associate that person with bravery
- **Person Positivity Bias** → tendency of people to think of individuals more favourably than groups
- **Trait Negativity Bias** → we are more influenced by negative information compared to positive information
 - eg. have stronger (negative) feelings about someone if you hear he stole something, than you do (positive) feelings if you know he volunteers at a shelter

- **Continuum Model of Impression Formation**

Fundamental way in which people form impressions of others

1. Initial Categorization - automatic judgments on appearance
2. Personal Relevance - determine if you will be interacting with this person
3. Attention and Interpretation - make trait judgments based on the person's behaviour
4. Confirmatory Categorization - preserve initial categorization unless there are discrepancies
5. Recategorization - find a new social category if the original one doesn't fit
6. Piecemeal Integration - combine new information into an overall assessment
7. Public Expression and Further Assessment - interact with individual based on impression formed

Social Cognition

social
cognition

schemata

the self

attribution

the self

self-
concept

self-
esteem

- **Self-Concept** → identity , knowledge, feelings and ideas about oneself
- **Self** → person's distinct individuality
- **Self-Schema** → mental framework that organizes the knowledge, feelings and ideas that make up the self-concept
 - Schematicity → some traits are more important to a person's self-concept
 - influences how we behave, judge others, and remember past events
 - Aschematic = self-schema is not very important for a specific trait
 - Schematic = self-schema is very important for a specific trait

How do we develop a self-concept on our own?

- Self-Awareness → ability to recognize oneself as a distinct entity
 - first step in development of self-concept
 - tested using the rouge test in humans
- **Self-Perception Theory** → we learn about ourselves by observing our own behaviour and making inferences about how we feel from our actions
 - people are not accurate at introspection or affective forecasting
 - **Introspection** = looking inward to one's thoughts to explain why we do the things we do
 - **Affective Forecasting** = predicting how we would feel about a future emotional event

How do we develop a self-concept through the influence of others?

- **Looking-Glass Self** → we infer and imagine what other people think of us from their reactions to our behaviour
- **Social Comparison Theory** → evaluate our own abilities and opinions by comparing ourselves to others
 - eg. feel good about yourself when you get a higher mark than others in the class

- **Independent Construal**

- emphasizes the uniqueness of the self, its autonomy from others and self-reliance
- self-concept is defined independently of others - **characteristic of individualistic cultures**
- one's traits/abilities are stable and difficult to change
 - more likely to persist after a success

- **Interdependent Construal**

- emphasizes the interconnectedness of people and the role that other's play in developing an individual's self-concept
- person is sensitive to others and strives to form strong social bonds with them - **characteristic of collectivist cultures**
- one's traits are malleable
 - more likely to persist after failure - believe that change is possible, so you work to correct your flaws

the self

self-
concept

self-
esteem

- **Self-Esteem** → our feelings of approval and acceptance of ourselves
 - generally stable after childhood
- two theories to explain why humans have self-esteem:
 - **Sociometer Theory** - use self-esteem to gauge the degree to which we are liked/disliked and accepted/rejected
 - low self-esteem tells us to change our actions to be accepted!
 - **Terror Management Theory** - people are motivated to look at themselves positively because they are afraid of death
 - people with higher self-esteem feel less fearful about death

- **Methods of maintaining self-esteem**

- 1) Self-handicapping**

- engaging in behaviours that will ruin performance in order to have an excuse for failure
 - eg. you think you will do well on a test tomorrow, so you go out and drink tonight - when you do poorly on the test, you have an excuse: you were out partying the night before

- 2) Basking in Reflected Glory (BIRGing)**

- increase self-esteem by associating with those who are successful
 - eg. If people's favourite sports team wins, people say "WE won!"
 - **Cutting Off Reflected Failure (CORFing)** - protect self-esteem by distancing themselves from those who have failed
 - eg. if your favourite team loses, people will say "THEY lost"

3) Downward Social Comparisons

- compare ourselves to people who are worse off than us
- feel better about ourselves if we know our situation could be worse

4) Self-Serving Cognitions

- general beliefs about ourselves that increase self-esteem
 - Better-than-Average Effect - most people rate themselves as better than average (everyone cannot be better than average! It's statistically impossible!!)
 - Unrealistic Optimism - most people are unrealistically optimistic about the future
 - Self-Serving Attributions - attribute success to personal factors, and attribute failures to situational factors
 - » 90% on a test → you are smart
 - » 50% on a test → your prof is unfair

- **Self-Discrepancy Theory**

- self-esteem is determined by the match or mismatch between how we see ourselves and how we want to see ourselves
 - **Actual Self** → self concept; our beliefs regarding our actual attributes
 - **Ought Self-Guide** → our beliefs about what we should be
 - **Ideal Self-Guide** → our beliefs about what we would like to be
- Discrepancy between actual-ought selves causes the existence of negative outcomes
 - eg. “I am a bad person”
- Discrepancy between actual-idea selves causes the absence of positive outcomes
 - eg. “I can’t go to university”

Social Cognition

social
cognition

schemata

the self

attribution

- **Attribution** → the process by which people infer the causes of other people's behaviour
 - most important classification we make is based on the importance of situational (external) and dispositional (internal) factors
 - **External factors** = stimuli in the environment
 - eg. living conditions, societal norms, laws
 - **Internal factors** = person's traits, needs, intentions
 - if someone behaves the way most people do in a social situation, we attribute it to external factors
 - eg. person holds the door open because that is what you do in public
 - if someone behaves in a negative or abnormal way in a social situation, we attribute it to internal factors
 - eg. person doesn't hold the door open - that person is rude

- **Kelley's Theory of Attribution**

- we attribute the behaviour of other people to external or internal causes based on three types of information:

1) **Consensus** - the extent that people engage in the same behaviour

- many people display the same behaviour → external attribution
- eg. high consensus - Bill and many others like the same music

2) **Distinctiveness** - the extent to which a person behaves differently toward different people or events

- behaviours distinctively associated with a specific event → external attribution
- eg. high distinctiveness - Bill has never felt this way before about a club
 - » His feelings must be due to something about the club

3) **Consistency** - the extent to which a person's behaviour is consistent over time

- high consistency can support both internal or external attributions
- eg. high consistency - Bill likes this club every time he goes

- **Fundamental Attribution Error**

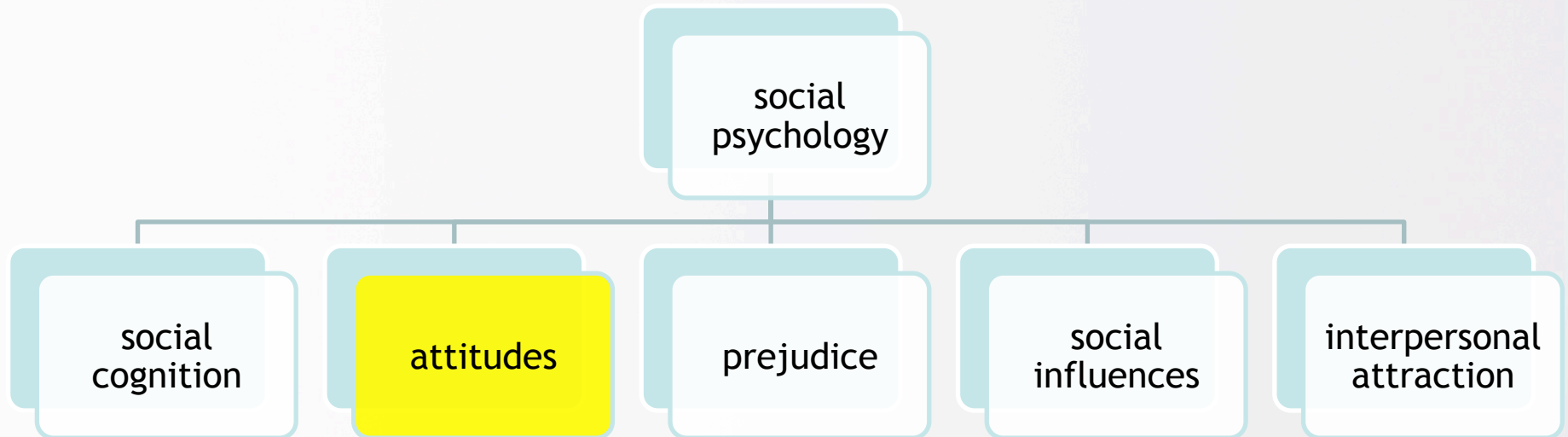
- we tend to overestimate the significance of internal factors and underestimate the significance of external factors when evaluating the behaviour of others
 - eg. when a driver cuts us off, we are more likely to say that he is a bad driver, then assume he didn't see us approaching
- Belief in a Just World → belief that people get what they deserve in life
 - eg. people live in poverty because they didn't work hard enough

- fundamental attribution error cont'd
 - **Actor-Observer Effect** → tendency to attribute one's own behaviour to external factors, but others' behaviour to internal factors
 - eg. girl explained her attribution to a fight as not getting enough sleep (external) and her boyfriend's attribution as being that he was selfish (internal)
 - Essentially, we use opposite of FAE to evaluate our own behaviour
 - two theories as to why this error occurs:
 - Knowledge-Across-Situations Hypothesis = we know our behaviour changes from one situation to the next, much better than we know other people
 - Visual-Orientation Hypothesis = when we think about ourselves we are looking into the environment; when we think about others we are looking at them and the environment fades into the background

- fundamental attribution error cont'd
 - **Self-Serving Bias** = tendency to attribute our successes to internal causes and our failures to external causes
 - eg. you did well on a test because you studied hard, while you did poorly on a test because the teacher is a picky marker
 - Previously mentioned in self-serving cognitions

- **Representative Heuristic** → classify a person into the category to which he appears to be the most similar
 - Base-Rate Fallacy → failure to consider the likelihood that a person is a member of a particular category based on mathematical probabilities
 - eg. “Linda was a commerce major with a minor in gender studies, and has always been independent and free-thinking. Is it more likely that she is a bank teller, or a bank teller who is also active in the feminist movement?”
 - People fail to recognize the base-rate → there are far more bank tellers than there are feminist bank tellers
 - One outcome is always more likely than two simultaneous outcomes

- **Availability Heuristic** → mental shortcut where we assume the things we are able to recall most easily are more important and occur more frequently than things that are difficult to imagine
 - eg. people assumed there were more words in the English language that started with k, than had k as the third letter (not true!)
 - this is because people could more easily think of words that started with k



Attitudes

attitudes

functions

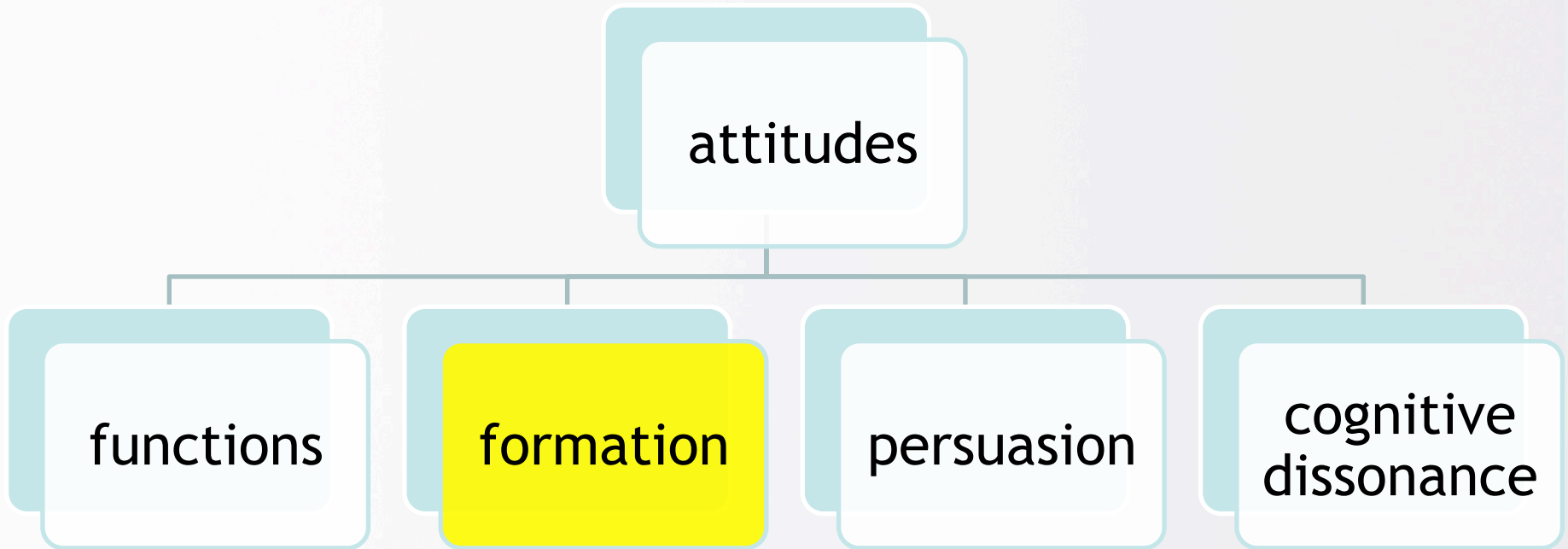
formation

persuasion

cognitive
dissonance

- **Attitudes** → evaluation of persons, places and things
- 5 functions of attitudes:
 - 1) **Utilitarian** - knowing “good” from “bad” helps us function efficiently
 - 2) **Social-Adjustive** - foster social cohesion
 - 3) **Value-Expressive** - give us a concrete way to express values
 - 4) **Ego-Defensive** - help us feel good about ourselves
 - 5) **Knowledge** - simplify our understanding of the world, allow us to use heuristics (rules of thumb)

Attitudes





Attitudes

- **Explicit** attitudes = our conscious evaluation of other people, objects or ideas
- **Implicit** attitudes = our unconscious evaluation of other people, objects or ideas

Attitudes

- measuring attitudes:
 - **Direct method** - people directly report their attitudes
 - **Indirect method** - assess attitudes without people being aware they are being assessed
 - used to avoid having people misreport their attitudes
 - Some attitudes are socially undesirable so people won't report them
 - **Implicit Association Test (IAT)**
 - indirect measure of attitudes using congruent and incongruent trials
 - congruent trial - flower/pleasant or insect/unpleasant have the same response key
 - incongruent trial - flower/unpleasant or insect/pleasant have the same response key
 - take the difference between the congruent and incongruent reaction times as a measure of attitude
 - eg. faster reaction time on congruent trial means a positive attitude about flowers

- a person's behaviour is not always consistent with his attitude
- relationship between attitudes and behaviour is influenced by several factors:
 - 1) **Degree of specificity** - as the attitude being measured becomes more specific, the person's behaviour is more predictable
 - eg. person's attitude towards a specific environmental club was a better predictor of whether he would join the club, compared to his attitude towards environmentalism

2) **Attitude Strength** - stronger attitudes are better predictors of behaviour

- motivational relevance - attitudes are more likely to be accompanied by behaviour if the effects of the behaviour directly affect the individual
- accessibility - easier or faster an attitude is retrieved from memory, the better the predictor of behaviour
- knowledge - the more information a person has regarding their attitude, the better the predictor of behaviour
- certainty - the more certain a person is in the correctness of their attitude, the better the predictor of behaviour

Attitudes

attitudes

functions

formation

persuasion

cognitive
dissonance



Attitudes

- **Message Learning Theory**
 - people must go through the following steps in order to be persuaded
 - exposure → attention → comprehension → yielding (ie. believe in arguments) → retention
- know now people don't actually have to go through all the steps - sometimes exposure it enough on its own

- aspects of persuasion (4):
 - **Source of the message**
 - credibility - messages are more persuasive if source is credible
 - eg. more persuaded by medical information in a medical journal than a random magazine
 - attractiveness - more persuasive when the person delivering the message is attractive
 - eg. celebrities are often used in commercials
 - **Content of the message itself**
 - one-sided vs two-sided - one-sided is better if the audience knows very little about the topic; two-sided is better if the audience is well-educated about the topic
 - order of messages - first is better if the audience is motivated; second is best if the audience is uninterested/unmotivated

- Recipient factors

- intelligence - average intelligence is easiest to persuade; low intelligence don't understand; high intelligence will argue with you

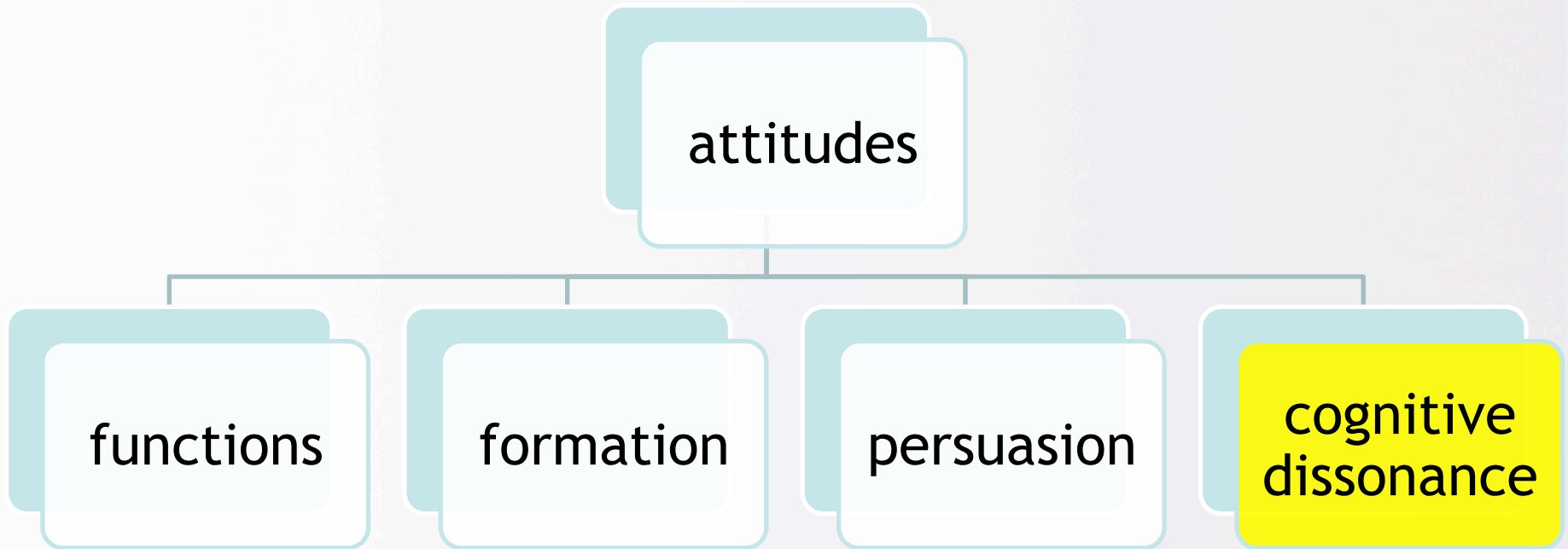
- Channel factors

- face-to-face vs mass media - face-to-face is more persuasive
- print vs audio-visual - print is better for complicated messages; audio-visual is better for simpler messages

- **Elaboration Likelihood Model**

- Posits that people either take a central or peripheral route when considering persuasive messages
 - Central Route (systematic) - person must think critically about the argument, weigh strengths and weaknesses, and elaborate
 - Results in real attitude change
 - Peripheral Route (superficial) - change is only associated with positive stimuli that have nothing to do with the argument
 - eg. being convinced of something a famous person says
 - Results in superficial attitude change

Attitudes



- **Cognitive Dissonance Theory**

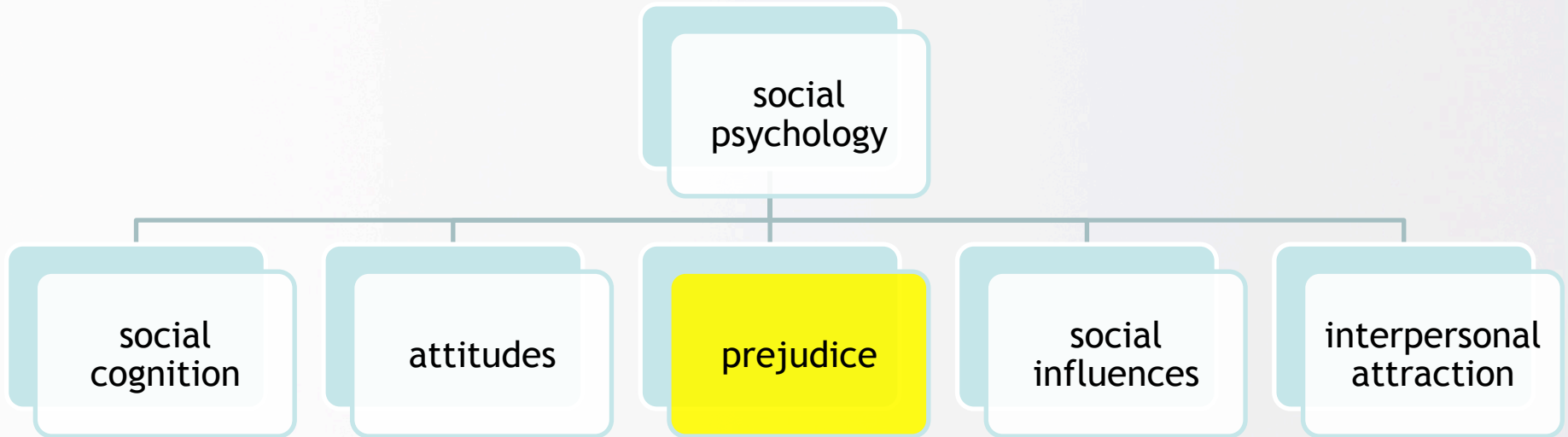
- when we experience a discrepancy between our attitudes and behaviour, between our behaviour and self-image, or between two attitudes, dissonance results
 - eg. person thinks he has overcome his racist thoughts, until he finds himself disapproving of a racially mixed couple he sees
 - experiences a conflict between his belief in his lack of prejudice and his new prejudice → DISSONANCE results!
- people want to maintain consistency across their beliefs, so they try to reduce dissonance by restoring consistency

- four methods to reduce cognitive dissonance:
 - using the example where a student who thinks he is intelligent, fails a course
 1. **reduce the importance** of one of the dissonant elements
 - eg. decides that grades are not important, and intelligence is not related to grades
 2. **add consonant elements**
 - eg. dwell on belief that his professor was unfair
 3. **change one of the dissonant elements**
 - eg. start getting good grades in school
 4. **deny relation** between inconsistent cognitions
 - eg. 'deny' you ever took the course by appealing to have the grade removed

- circumstances in which dissonance commonly occurs:
 - **Inconsistent Behaviour** - people who perform a behaviour that is inconsistent with their attitudes will change their attitude to reduce dissonance
 - eg. people completed a boring task, and were then asked to rate how exciting it was - 2/3 of participants had to lie to the next participant and say it was really exciting
 - 1/3 of participants received \$1 to lie - experienced the most cognitive dissonance because their behaviour was not justified, and they were inconsistent with their cognitions and behaviours
 - » they reduced dissonance by convincing themselves the activity was more exciting than it was
 - 1/3 of participants received \$20 to lie
 - 1/3 only had to rate how exciting it was (no lying)

- **Forced Choice** - people who have to choose between two similarly-valued objects will raise the value of the chosen object and lower the value of the unchosen object
 - eg. two groups of people rated two products and were then told they could pick one to take home
 - ½ the participants had two similarly-valued objects - they experienced the most cognitive dissonance when choosing one to take home
 - » when asked to re-rate the objects, they made their initial ratings even more extreme (higher for chosen, lower for unchosen)
 - ½ the participants had two very different objects - it was an easy choice for them so they had the least cognitive dissonance

- **Effort Justification** - people who put in a lot of effort to achieve a goal will increase their value of the goal to reduce dissonance
 - eg. female participants participated in a group discussion on sex
 - 1/3 of participants just went straight into the discussion
 - 1/3 of participants had to first read aloud a list of basic sex words (eg. reproduction)
 - 1/3 of participants had to first read aloud a list of obscene sex words - they experienced the most cognitive dissonance because the sex talk only ended up being about plant reproduction
 - › they had to put in the most effort to attend the discussion, so afterwards when asked to rate the presentation, they gave the highest ratings to reduce cognitive dissonance



Prejudice

prejudice

origins

consequences

Prejudice

- **Prejudice** → preconceived opinion, or a bias toward a person or group that is usually unfavourable (ATTITUDE)
 - focuses on salient features (eg. skin colour) and assumes the person possesses other negative characteristics
- **Stereotype** → overgeneralized and false belief about the characteristics of members of a particular group (BELIEF)
- **Discrimination** → differential treatment of people based on their membership in a particular group (BEHAVIOUR)

- Stereotype → Purple people are not intelligent (BELIEF)
- Prejudice → That person is purple, so they must not be intelligent (ATTITUDE)
- Discrimination → When the purple guy asks to be in my group for a project, I say no (BEHAVIOUR)

- group homogeneity effects
 - people see members of the out-group as more similar to one another, than members of the in-group
 - this is even demonstrated when group assignment is arbitrary
- illusory correlation
 - an apparent correlation between two distinctive elements that does not actually exist
 - eg. crimes and minority groups are both distinct, but there is no actual correlation between crimes and minority groups, despite this stereotype

- **Realistic Conflict Theory**

- out-group hostility is caused by a competition for limited resources
- eg. boys at a summer camp were divided into two cabins and competed against one another - boys were very hostile during competition
 - hostility decreased when boys had to work together on common tasks
- eg. teacher (Jane Elliot) announced blue-eyed children were superior to brown-eyed children, and they received special privileges
 - the students formed hostile in-groups and out-groups

- **Social Identity Theory**

- proposed self-concept is made up of our personal identity and social identity
 - personal identity → unique individual characteristics
 - social identity → groups to which one belongs
- people favour their in-groups over their out-groups in order to enhance self-esteem
 - threats to self-esteem breed prejudice
- more strongly people identify with their group, the stronger the in-group bias
- people are more hostile towards the out-group after they themselves experience a drop in self-esteem

Prejudice

prejudice

origins

consequences

- **Self-Fulfilling Prophecy** = an expectancy based on a stereotype, that causes a person to act in a manner consistent with that stereotype
 - eg. males spoke differently on the phone to women, depending on if they saw an attractive or an unattractive photo of a woman beforehand
 - the words had a positive or negative effect on the women that could be detected by observers later on
 - eg. teacher was told certain students were extremely intelligent -testing later revealed an increased IQ score for these children as the teacher had given them more attention, which affected the students

- **Stereotype Threat**

- fear among members of a group that they may confirm or be judged in terms of a negative stereotype when put in a relevant situation
- eg. there is a stereotype that men are better at math than women
 - told half the women that men usually do better on the math test, didn't tell the other half this
 - women who were informed of the stereotype scored lower than the men, the women who weren't informed scored equal to the men



Practice MC Question!

The tendency of people to explain their own behaviours in terms of situational factors and others' behaviour in terms of dispositional factors is termed _____.

- a. belief in a just world
- b. self-serving bias
- c. actor-observer effect
- d. the distinctiveness principle

C.



Practice MC Question!

Suppose that you have a lot of friends who don't drink alcohol. Suppose that you are then asked to answer the following question: "How many people do you think drink alcoholic beverages?" You reply, "Not many," based on the number of your friends who drink. In this case you have made an error based on the _____ heuristic.

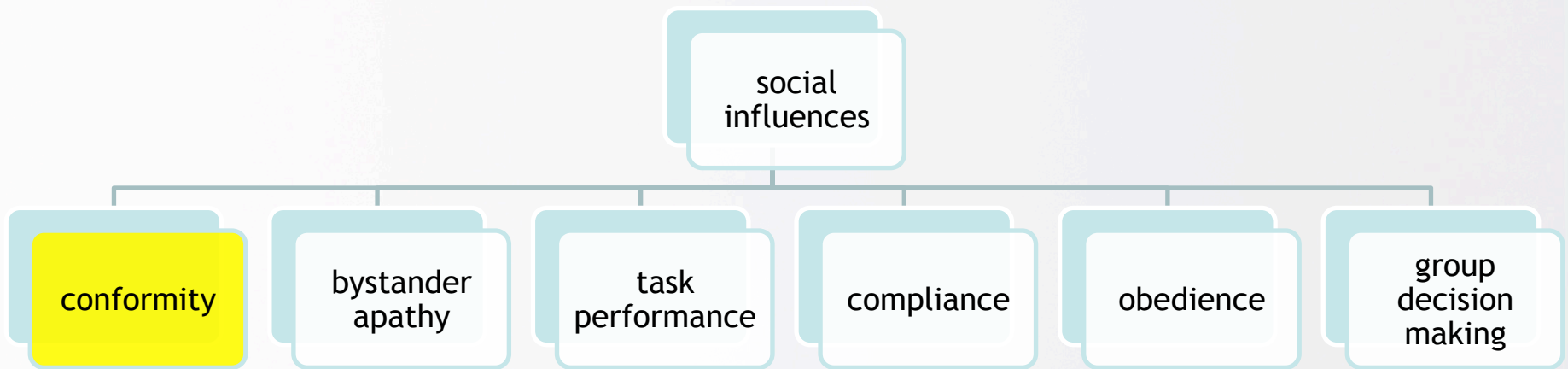
- a. similarity
- b. representativeness
- c. general
- d. Availability

d.

Describe cognitive dissonance, and two methods for reducing dissonance.

- Cognitive Dissonance → a discrepancy between an attitude and behaviour, a behaviour and self-image, or two attitudes causes dissonance to occur
- we want to maintain consistency in our attitudes and behaviours, so we try to reduce the dissonance by employing certain cognitive dissonance reduction methods to restore consistency
 - reduce the importance of one of the dissonant elements
 - eg. eating fish when you're a vegetarian isn't a big deal because you're only a vegetarian for 'fun' - it's not something that really matters to you
 - add a consonant element
 - eg. you had to eat fish because it was what your grandmother made you for dinner

Social Influences



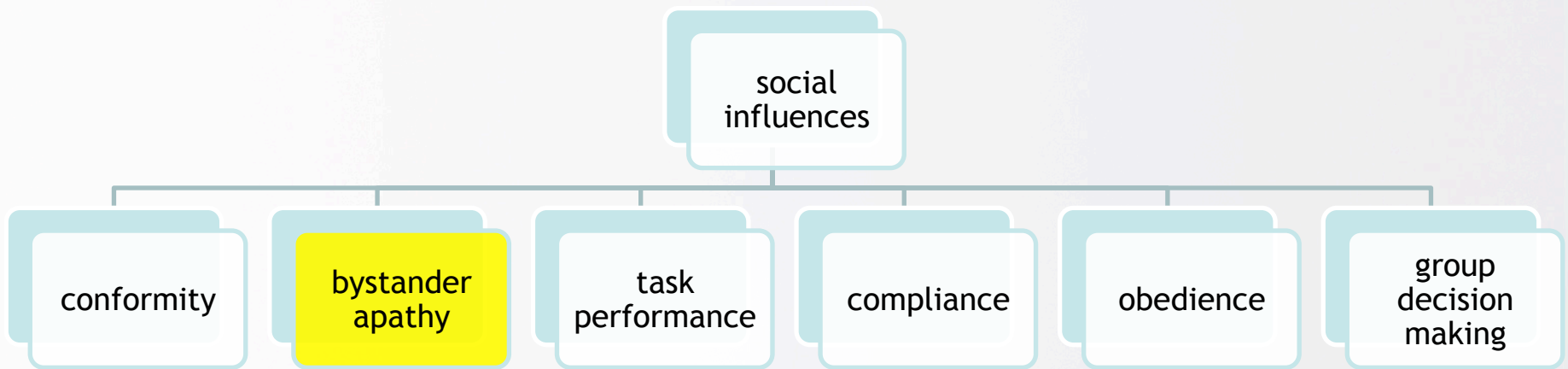
- **Conformity** → the adoption of attitudes and behaviors shared by a particular group of people
 - study 1: Sherif's experiment involving the autokinetic effect
 - participants had to look at a light projected on a wall in a darkened room and state how far the light moved
 - they all came up with their own very different estimates
 - later, the participants were put in groups of three and collectively decided how far they thought the light was moving
 - when participants were tested alone again, many gave answers similar to the answer of their group
 - ie. they had conformed to the group norm

- study 2: Asch's line experiment
 - wanted to test if conformity occurred even in a situation where the truth was obvious!
 - 7-9 participants seated at a table, 1 of the people was a true participant who was seated at the end, the others were confederates
 - participants shown a comparison line and three other lines - had to say aloud which line was the same length as the comparison line
 - under some conditions, the confederates gave incorrect responses - when they made incorrect responses, 76% of true participants chose the wrong line as well
 - the participants conformed to the group behaviour even when the correct answer was obvious!

- reasons for conformity:
 - **Informational Influence** - people conform because they think others are correct
 - eg. autokinetic effect experiment - the light doesn't actually move as it's only an illusion - it made sense that participants conformed to the group because it was **ambiguous**
 - **Normative Influence** - people conform because they fear the consequences of standing out
 - eg. Asch's line experiments - people who stray from the group are often ridiculed (this can even be seen in people who dress/act/talk differently!)

- **Types of Conformity (2):**
 - **Private conformity**
 - happens when there is change in a person's beliefs and behaviour
 - occurs under informational influence
 - **Public conformity**
 - happens where there is a superficial change in behavior - the person doesn't actually 'believe' what he is doing
 - occurs under normative influence

Social Influences



- **Bystander Apathy** → the presence of others inhibits helping
 - eg. the case of Kitty Genovese
 - Kitty was murdered near her apartment, while 38 of her neighbours saw and heard the attack happen - not one person called 911, probably because everyone thought someone else would seek help

Social Influences

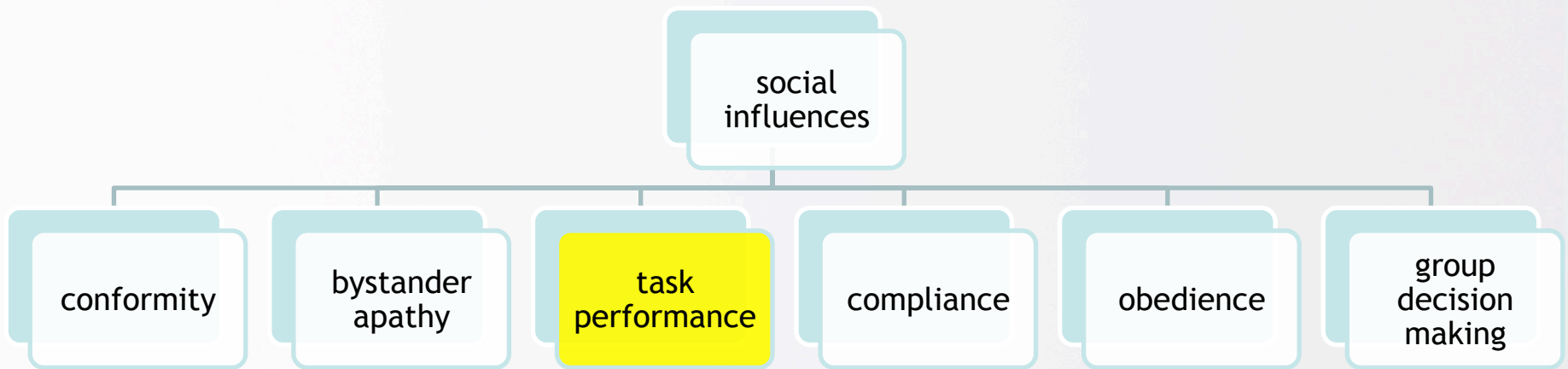
- study 1: participants filling in questionnaires when smoke started filling the room
 - people were most likely to go get help because of the smoke if they were alone, followed by if they were with two other real participants
 - participants were least likely to get help if there were two confederates in the room who did nothing
- study 2: participants seated in another room watched the experimenter fall from his chair in another room
 - people were most likely to help the experimenter if they were alone, followed by if they were with two other real participants
 - participants were least likely to get up and help the experimenter if there was one confederate who did nothing



Social Influences

- causes of bystander apathy:
 - less likely to notice the situation if there are others around
 - less likely to think of the situation as an emergency if there are others around
 - there is a diffusion of responsibility when others are around - everyone thinks someone else will intervene, so they needn't bother

Social Influences



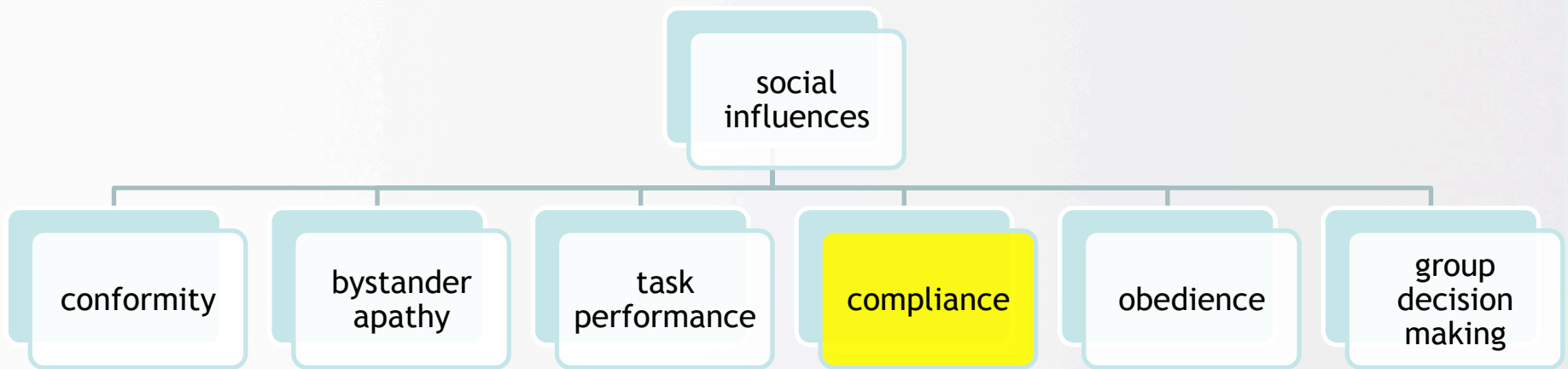
Social Influences

- **Social Facilitation** = the enhancement of a person's performance by the presence of other people
 - if the task is simple, social facilitation occurs
 - if the task is complex/difficult, social interference (the opposite of social facilitation) occurs - the audience impairs the person's performance
- explanation (Zajonc): the presence of people watching raises the performer's arousal
 - increasing arousal increases the probability of performing the dominant response
 - if the task is simple, the dominant response is correct
 - if the task is harder, the dominant response must be chosen among many responses

- what causes arousal when others are around?
 - **Mere Presence Theory** - aroused simply because others are around
 - **Evaluation Apprehension Theory** - aroused because others are evaluating our performance
 - eg. participants more like to perform the dominant response in front of two seeing confederates, than two blindfolded confederates
 - **Distraction Conflict Theory** - aroused because having other people around distracts us

- **Social Loafing** = decreased effort put in by individuals when performing a task with other people
 - eg. you don't pull as hard when playing tug-of-war with a group of people, than you would if you played alone
 - efforts in a group by individual members are affected by whether his individual efforts can be observed
 - eg. people more likely to put in more effort for a group project if everyone is being marked individually

Social Influences



- **Compliance** → a change in behaviour caused by a direct request from a non-authority figure
- **Principles of Influence (5):**
 - **Consistency and Commitment** - want attitudes to be consistent with our behaviour, so once a request has been made, we want to do the same thing in the future
 - **Reciprocity** - feel we need to repay people for things they have done for us

Social Influences

- **Social Proof** - if we see other people complying, we will do the same thing that other people are doing
- **Liking** - want to comply more with someone who we like
- **Authority** - authority figures can exert much power over us

- compliance techniques:

1. **Foot-in-the-door technique** - influencer prefaces the real request by first getting the person to comply with a much smaller request

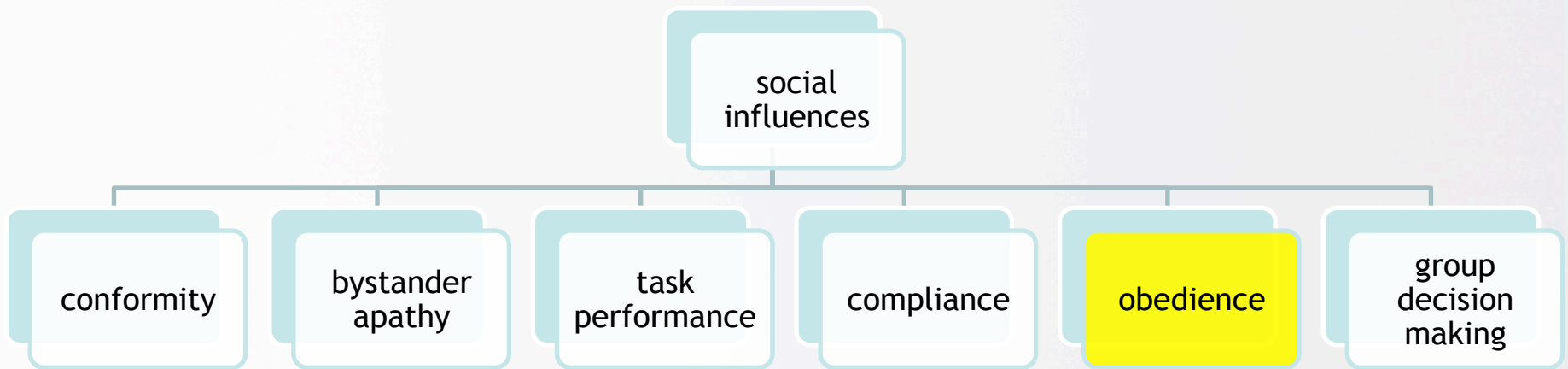
- study: knocked on people's doors and asked them to display a small sign in your window to encourage responsible driving (small request)
 - a couple weeks later, they approached the same people to display a large, ugly billboard on their lawn reading "DRIVE CAREFULLY" (large request)
 - 76% of people who had been approached for the small request also agreed to the large request
 - control group - 17% of people who hadn't been approached for the small request, agreed to the large request
- works because people want to be CONSISTENT!

- 2. Low-balling technique** - influencer secures agreement with a request, but then increases the size of that request with hidden costs
- eg. salespeople often use low-balling
 - study: university students were called to take part in a study - only after they said yes, were they informed the study began at 7 am (hidden cost)
 - control group - students were called and immediately told the study began at 7 am
 - students were more likely to agree to participate if they had already agreed before being told the time
 - works because people are COMMITTED!

3. **Door-in-the-face technique** - influencer first presents a request so large that it will likely be rejected, followed by the real request
- study: students approached and asked to volunteer in a juvenile delinquent centre two hours a week for the next two years (large request)
 - many said no, but then agreed to take juvenile delinquents on one trip to the zoo (real request)
 - control group - were only asked to go on the zoo trip - fewer people in control group agreed to this task than the students above
 - works because of RECIPROCITY (the person asking me to comply is giving up something when he makes the request smaller) and perceptual CONTRAST (the real request seems much smaller in comparison to the larger request)

- 4. That's-not-all technique** - influencer makes an initial request and then before the person can respond, he increases the attractiveness of the request by offering another benefit
- study: students told at a bake sale table that one cupcake costs 75 cents, then the researcher threw in two cookies before the student responded
 - control group - students told that one cupcake and two cookies costs 75 cents - much fewer students in the control group agreed to buying the desserts than did the real participants
 - works because of RECIPROCITY (the other person is being nice by adding something for us) and perceptual CONTRAST (the additional offer makes the new request seem better than the initial one)

Social Influences



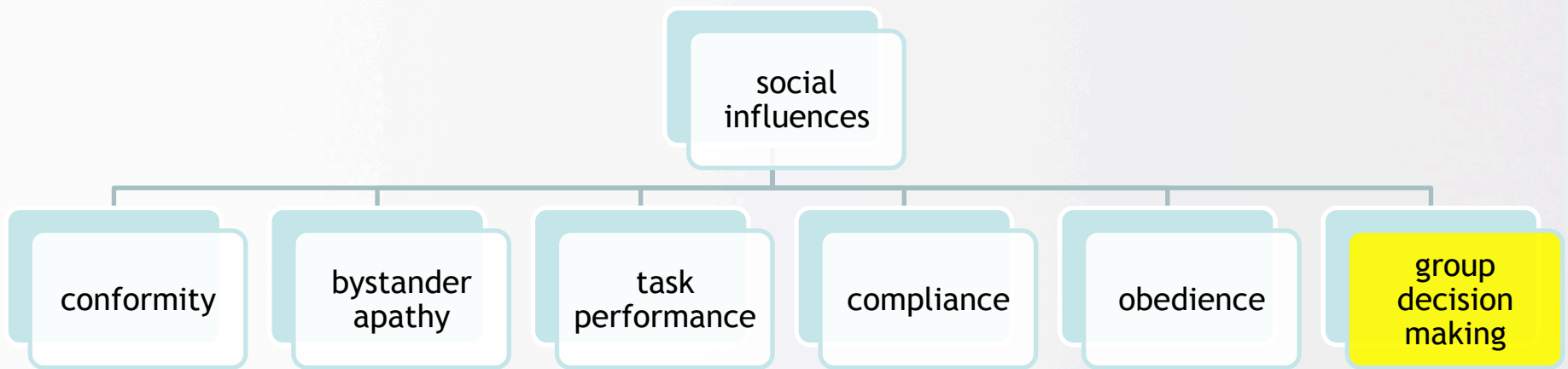
Social Influences

- **Obedience** → change in behaviour produced by the commands of authority
 - most of the time, people will blindly obey authority
- study: Milgram's experiment
 - the participant was the “teacher” in a learning experiment and was required to deliver shocks for each mistake that the “learner” (confederate) in another room made
 - shocks ranged from 15 to 450 volts and had signs such as “Danger: Severe Shock” next to them
 - learner became increasingly agitated, begged to stop, said he could no longer stand the pain, and even stopped responding at one point
 - researcher would say “Please go on”, “The experiment requires you must continue”, etc
 - 65% of participants went all the way to 450 volts!

- **Factors influencing obedience (5):**
 - **closeness of authority figure** - closer the authority figure, the greater
 - **distance from the victim** - obedience dropped if participant was in the same room, or had to force the confederates arm to be shocked
 - **legitimacy of authority figure** - obedience highest when authority figure had high status
 - **presence of other participants** - obedience fell if confederates acting as participants were present and refused to go on
 - **responsibility** - obedience dropped when participants were told they were responsible for the welfare of the confederate

- comments about Milgram's experiment:
 - people couldn't believe participants gave such high shocks - fundamental attribution error
 - underestimate the effects of the situation, and overestimate personal characteristics
 - ethical concerns - wouldn't pass today's ethics, but many people were happy they participated
 - methodology - did participants truly believe they were shocking? were the shocks realistic? did participants think they had a choice? did participants have enough time to reflect on actions?

Social Influences



- **Group Polarization** = the tendency for the initial position of a group to become exaggerated during the discussion preceding a decision
 - if the initial position is to make a risky decision, group discussion will make the decision riskier
 - if the initial position is to make a conservative decision, group discussion will make the decision more conservative
- group polarization changes your own attitude
 - eg. you become even more of an environmentalist after attending a few environmental meetings and discussing issues with group members

- causes of group polarization (3):
 - **informational influence** - group discussion involves learning new information regarding the decision to be made
 - **repeated exposure** - relevant points are repeated during group discussion
 - **normative influence** - people tend to embrace the general decision of the group to receive reinforcement from other members

- **Groupthink** → happens when the need for consensus overrides the motivation to explore other options and make an appropriate decision
- **Causes of Groupthink**
 - Stressful Situations
 - Highly cohesive groups
 - Homogenous groups
 - Isolated groups
 - Directive leadership
 - Lack of systematic procedures



Social Influences

- Symptoms of Groupthink
 - Group overestimates ability
 - Group is closed-minded
 - “Mindguards”
 - Self-Censorship
 - Illusion of Unanimity



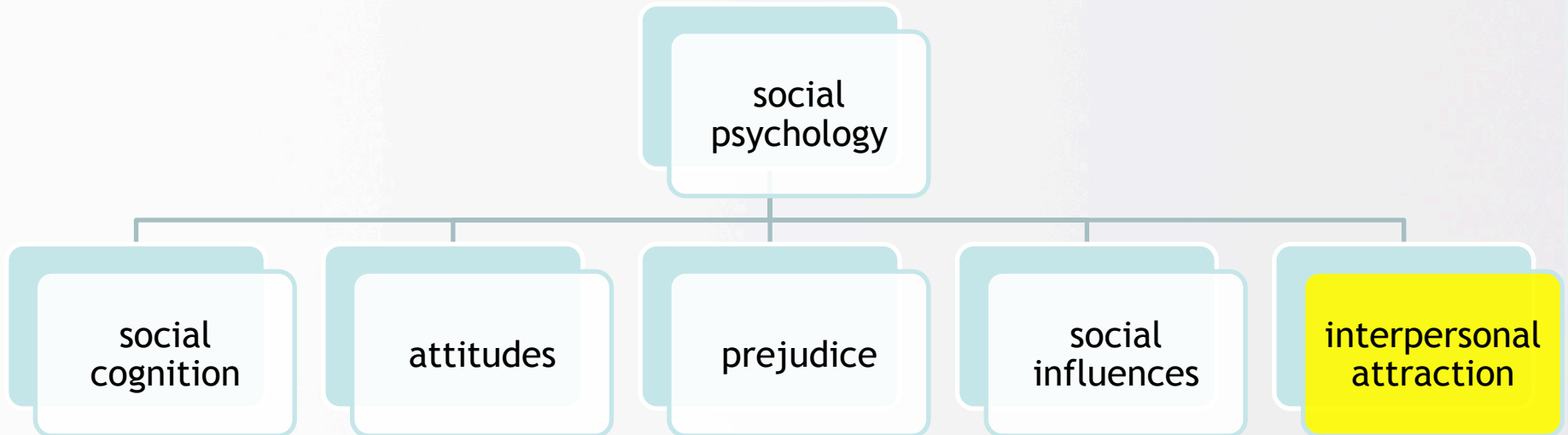
Social Influences

- Consequences of Groupthink
 - Incomplete understanding
 - Incomplete research
 - Failure to consider risks
 - Bias for confirmatory information



Social Influences

- Ways to avoid Groupthink:
 - avoid group isolation
 - establish a group norm of critical evaluation
 - leaders should be unbiased and not allow conformity pressures
 - choose a “devil’s advocate” to provide counterarguments



Interpersonal Attraction

interpersonal
attraction

factors

development/
maintenance



Interpersonal Attraction

- factors determining interpersonal attraction:
 - **Positive Evaluation** - we like those who treat us well and dislike those who punish us
 - **Familiarity** - the more frequent the exposure to someone, the more positive our attitude towards them
 - **Similarity** - more likely to be close with someone who is similar in looks, attitudes, personality, intelligence, age, occupational status and ethnicity



Interpersonal Attraction

- **Proximity** - more likely to develop a relationship with someone who is physically close to us
- **Physiological Arousal** - if we are aroused by fear or anxiety in the presence of another person, we are more likely to become attracted to him/her
 - eg. men interviewed by a woman on a wobbly bridge were more likely to call her afterward than were men interviewed by the same woman on a sturdy bridge
- **Physical Appearance** - we are more attracted to people who are good-looking
 - “what is beautiful is good” stereotype - beautiful people are seen as happier, more intelligent, and more socially skilled than people who are less attractive

Interpersonal Attraction

interpersonal
attraction

factors

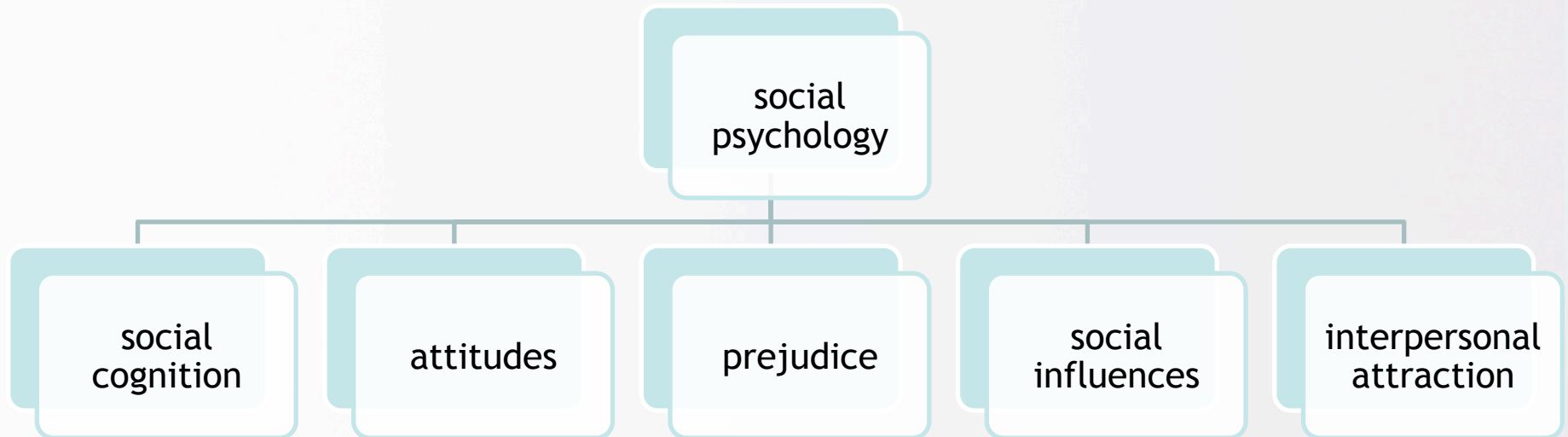
development/
maintenance

Interpersonal Attraction

- **Social Exchange Theory** explains why we stay in some relationships and leave others
 - people want to maximize the benefits (love, companionship, intimacy) and minimize the costs (time, less independence) of a relationship
 - happy with the relationship if the benefits outweigh the costs
 - OUTCOMES = REWARDS - COSTS
 - Comparison Level = average outcome a person expects from a relationship
 - OUTCOMES - COMPARISON LEVEL = (DIS)SATISFACTION
 - Comparison Level for Alternatives = expectations about what we could receive in another relationship
 - more likely to stay in the relationship if our comparison level for alternatives is low

Interpersonal Attraction

- **Investment Model** proposes commitment is a better predictor of a relationship's success than satisfaction
- commitment is determined by three factors:
 - **Satisfaction** = $\frac{\text{rewards} - \text{costs}}{\text{comparison level}}$ (same as social exchange theory); higher satisfaction means more commitment
 - **Quality of Alternatives** - higher quality of alternatives means less commitment
 - **Investment** - resources that you don't get back if the relationship ends; greater investment means more commitment
- **COMMITMENT = (SATISFACTION - QUALITY OF ALTERNATIVES) + INVESTMENT**





Practice MC Question!

The tendency for the initial feelings or thoughts of a group to become exaggerated during a discussion that precedes a decision is called _____.

- a. group mindset
- b. groupthink
- c. group polarization
- d. group tilt

C.



Practice MC Question!

One explanation for the failure of people to come to the aid of a person in need, particularly when others are present is _____.

- a. groupthink
- b. diffusion of responsibility
- c. deindividuation
- d. social loafing

b.



Practice Short Answer Question!

Compare and contrast the foot-in-the-door and low-balling compliance techniques.

- compare:
 - both are techniques used to get people to comply (change their attitudes or behaviour) to a request
 - both techniques involve using a smaller request, followed by a larger request
- contrast:
 - foot-in-the-door involves PREFACING the real request with a **different, smaller request**; low-balling involves the **same request**, but just an increased and decreased version of it
 - foot-in-the-door example: ask someone to donate \$10 to charity, come back a week later and ask them to donate \$500
 - low-balling example: have someone agree to buy a car for \$5000, then go talk to your boss and come back with an increased price due to extra costs
 - foot-in-the-door works because of **consistency**; low-balling works because of **commitment**



PSYC 100

... and that's PSYC 100!!

Remember to review lecture notes, online lessons and textbook readings. Try the online quizzes again, as the multiple choice questions on the exam will be very similar to these.

For SA questions, use examples and underline key words!

Feel free to come talk to me if you have any questions right now, or send me an email if you come across something while studying!

Good luck with your studying and thank you for supporting SOS! 😊



PSYC 100

Note: Much of the material presented in these slides was taken from the PSYC 100 online lessons, as well as the textbook