Lecture 15 cont'd

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CHAPTER 11 MOTIVATION AND WORK

I. Motivational Concepts

- Motivation= the *WHY* of behaviour, why we do what we do
  - Directs and energizes behaviour

A. Instincts theory

- One of the theories that explains behaviour
- Instincts motivate human behaviours
- Instinct= genetically determined predisposition to behave in a very specific way when a specific stimulus is presented
  - All members in a particular species will behave in the same way when this particular stimulus is present
- Problem with this: *everything* humans did was because of instinct. **Not true!**
- The theory became blown out of proportion, and on top of that, there were people whos arguments were circular
  - Ex. People who jog do it because of instinct. We know this because they are jogging.
- **The idea that genes are important to human behaviour is still important.**

B. Drives and incentives

- According to drive theories: we have basic biological needs that must be met, ex. Food, water.. Etc.
- When these needs are not satisfied, the state of tension is built up in the organism
  - This state of tension is adversive and uncomfortable, we are motivated to take action to reduce the tension
  - Drives push us to take action so we can reduce the tension
  - The longer you take to do the action, the higher the tension

- Incentives theory: we do have internal needs, but in the external environment, there are rewards and incentives that pull us towards them and motivate us to get the rewards

C. Optimal arousal

- According to this theory, humans and animals are motivated to maintain an optimal level of arousal
- If arousal is too low, we become bored, restless, unpleasant and we are motivated to do something to get out of it
- Similarly if arousal is too high, it is uncomfortable, aversive, and we do what it takes to bring the arousal down, to maintain at an optimal level
  - Animals will take an electric shock in order to reach the next level of arousal that is necessary

D. A hierarchy of motives (*MASLOW)*

- According to Maslow we have both physiological and psychological needs
- Whether bio or psycho, these needs motivate us to satisfy them
- Some needs take precedence over others
- There is a hierarchy of needs, some needs must be met first, and once met and satisfied we can move onto higher and higher needs to satisfy

1. Physiological needs are satisfied first: food, thirst, sleep
2. Safety needs: shelter, being physically safe
3. Belonging/ love needs: no just family and friends, colleagues etc.
4. Self-esteem needs: need to feel valued, importance, accomplishment
5. Self-actualization needs: our need to live in line with our potential, true self, to blossom.
6. Self-transcendence: the need to find meaning and purpose outside of the self

I. Hunger

A. The physiology of hunger

- Empty stomach? Is there a relationship between empty stomach and hunger?
- WASHBURN: swallowed a balloon, when there were contractions in stomach there was a hunger feeling
- No stomach: yes, even without stomach you can have an appetite and feel hungry; indicating there is much more to hunger/ eating behaviours than just an empty stomach

- Body chemistry & the brain:
  - Hormones that signal eating:
    - When glucose levels are low (about 30 mins before we eat)
    - Ghrelin is known as the hunger hormone
      - High levels of grhrelin is associated with hunger, and we are more likely to eat when levels of ghrelin are high
  - Hormones that signal stop eating, signal satiation:

        - Pyy
        - Cck

    - Hypothalamus:
        - Stimulating the lateral hypothalamus will cause the animal to eat and eat etc. As long as it is stimulated
        - Stimulating ventromedial hypothalamus will cause the animal to stop eating

    - Leptin: hormone that is released by the brain
        - The higher the amount of fat in fat cells, the higher the leptin is released
        - This is the way the fat cells tell the brain to do something if levels get too high
        - We know in animals, that when levels of leptin are too low, the organism will eat to no end . As soon as this organism is injected with leptin, the metabolism of the organism goes up, and they eat less, and they lose weight

    - Set-point weight: some researchers believe that the brain has an optimal weight that it prefers. As such, the brain will do what it takes to keep this weight
        - According to this, if a person drops below the optimal weight the brain prefers, the brain will start to take action: person will eat more, move less, and metabolism will go down.

    - Basal metabolic rate (BMR): the metabolic rate at rest
        - In order to maintain basic body functions, he body will always maintain a certain level of metabolism
        - Minimum amount of energy the body needs to keep body alive
        - Something bad for this rate: low calorie diet

B. Psychology of hunger

- Eating disorders: eating behaviours that are maladaptive, harmful to the body

- Anorexia nervosa:
    - Person who is terrified of gaining weight and becoming fat
    - As a result, this person takes extremes measures
    - Cut down caloric intake to the point of self-starvation
    - In spite of the fact that they lose 25-50% of their body weight, are 15% below normal weight, they refuse to maintain normal weight and CONTINUE TO BELIEVE THEY ARE FAT
    - They are in denial that they have this problem
    - Young woman with anorexia is 12X more likely to die than their counterparts that do not have the disease

- Bulimia nervosa
    - Person is afraid of becoming fat, use different strategy
    - Binge and purge: consume huge amounts of calories in one sitting , once done, they feel guilty/ashamed. They then purge: induce vomiting, laxatives, enemas
    - This action is extremely dangerous, puts people at higher chance for dying
    - They do however acknowledge they have problems
    - This is hard to detect, because people who are bulemic are usually within normal range/body figures

- **some causes contributing to this**
    - Genetics: identical twins are mroe similiar in their risk to eating disorders than fraternal twins, however it is not always true so there are also other reasons linked to it
    - Family background: bulimics tend to come from families with higher levels of alcoholism, depression, and obesity
        - Anorexic people come from families whose parents are high achievers, with unreasonably high expectations of their kids
    - Psychological variables: ex. Low self esteem, rigid and inflexible thinking
        - In anorexia: need/ unusual need for control. They consider not eating and exercising for many hours at a time- considers that as winning for something.
        - Bulimics have poor impulse control
    - Culture: cultures that appreciate full figures have less occurrence of eating disorders than cultures that have more preference for thin figures
        - However culture is not everything
        - Cultures where big figures are appreciated, they may have less eating disorder numbers but we still have SOME eating disorder patients

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C. Obesity

- Eating disorder
- 68% of americans are overweight or obese
  - In Canada, our numbers are high, but not exactly the same.
- Worldwide, people are getting larger worldwide
- Fat is essential for survival
  - Body functions necessary
  - It becomes maladaptive when we have too little or too much fat
- Dangers with obesity:
  - Increases risk for many diseases: heart disease, diabetes, and cancer
  - Those who are obese die earlier than non-obese individuals
  - If children continue to gain weight and there is not intervention, this will be the first generation that will not live as long as their parents (due to childhood obesity)

➢ Why is this happening?
  - Genes: from family studies, identical twin studies etc. However they do not explain everything, there are many other variables responsible for us becoming obese
  - Physiology of fat cells:
    - Once you have a fat cell, you keep it forever, you never lose them
    - Fat cells are less metabolically active than lean tissue (ex. Muscles)
      - 1lb of muscle will spend 30-50 calories just relaxing
      - 1lb of fat will only burn 2-3 calories while relaxing
    - It takes less calories to keep fat than it does to make fat
      - Out of 100 calories of fat, you store 98
      - Out of 100 calories of good food (fruits, veggies), you only store 70 calories
    - Fat cells are dynamic and involved
    - Scientists have started using fat stem cells to create bones and cartilage etc.
    - Researchers believe that they can use fat stem cells to create neurons
  - Set point- some researchers believe that some people have harder time losing weight because they have a higher than average set point
  - Low calorie diets: don't help you lose weight
    - When you cut calories significantly, the body thinks it is starving
    - To conserve energy, basal metabolic weight decreases
    - This makes it harder for you to lose weight
  - Lack of sleep
  - Stress
  - Abundance of food
  - Ignorance: we don't pay attention to how much fat/calories are in what we eat
  - Technology: makes us sedentary

- Best way to lose weight?
  - Create an imbalance: spend more calories than you consume
  - Moderately cut down on your food intake
  - Increase activity

III. Sexual Motivation

A. The study of sexual behaviour

- Havelock Ellis:
  - Pioneer for research on human sexuality
  - As a youth, he had nocturnal emissions
  - In his days, in medical books it said that they were related to disease
  - He started documenting his life so that doctors could later see what happens
  - He was never sick, did not get disease... So the doctors were wrong.

- He then went on to do objective documentation and research.

- Kinsey:
  - Biology professor
  - His students would ask him about sex.
  - He did the FIRST extensive survey on human sexuality
  - Surveyed thousands of people related to sexuality

- Masters and Jhonson
  - Recruited couples or single individuals to come to the lab
  - They hooked them up to heart rate machines, emg's, skin responses, then told them to have sex.
  - From this, they determined how the body reacted to sexual intercourse

B. The Physiology of Sex

B.1: Sexual response cycle: study in the book

B.2: Sexual disorders

- Persistent sexual problems
- Cause person to be unhappy, depressed, and cause problems in interpersonal relationships
- Premature ejaculation: when ejaculation occurs very quickly, right before intercourse or shortly after penetration, which leaves the partner dissatisfied
- Erectile dysfunction: when a man is unable to have an erection or to sustain one. Could be physiological , but could also be psychological. To determine the difference,
- Orgasmic disorder: when a woman has difficulty achieving an orgasm, no matter what stimulation is tried.

B.3: Hormones and sexual behaviours

- During the menstrual cycle, hormones change significantly
- Question? Is a woman's sexuality affected by the menstrual cycle?
- Answer: if you're a cat, dog, mouse... DEFINITELY.
  - Women, on the other hand, have strong sexual desire throughout the menstrual cycle. Therefore they are not affected completely by the menstrual cycle.. However there is SOMEWHAT a difference
  - Perhaps during ovulation, there may be somewhat an effect
- However, if estrogen is not that powerful for sexuality, what is the hormone?

- **Testosterone** is the hormone that influences sexual desire for both men and women
- **Hypothalamus:**
  - Involved in regulation of sexuality and sexual behaviours

C. The psychology of sex

- External Stimuli:
  - Bottom line, both men and women enjoy and find pleasure in sexy visual stimuli
  - **Adverse effects** to watching sexy movies/magazines?
    - Only if you overdo it, you will become dissatisfied with normal people
    - You start comparing partners to what they see in the magazines/movies
  - Looking at porn is fine - as long as its NOT violent porn
    - When men watch violent porn, based on research, they tend to become more aggressive towards women in real life. You are conditioning yourself to be aroused by violence

- Imagined stimuli: both women and men fantasize about and get aroused by imagined stimuli

D. Adolescent Sexuality

E. Sexual Orientation

E.1: introduction

- Definition: who you are attracted to physically and emotionally. Members of the opposite sex= heterosexual. Members of the same sex= homosexual. Both sexes= bisexual

- Prevalence of homosexuality? Different surveys are giving us a variety of numbers. Why the discrepancy? Depending on where they took the survey (ex. Big cities, little towns)
    - Researchers believe that 3-4% identify as homosexual
        - 1-2% identify as lesbians
        - <1% identify as bisexuals
    - Researchers have found that a large number of people have had at least one homosexual experience

- Erotic plasticity: the idea that the higher the erotic plasticity, the more likely sexuality will be affected by external factors (ex. Religion, culture, education etc.)
    - The higher the erotic plasticity, the less rigid sexual identity / orientation is
    - The lower the erotic plasticity, the more rigid, the more inflexible sexual orientation is. And the less likely sexuality will be affected by external factors
- Some researchers have proposed that women have higher erotic plasticity then men
    - A highly educated woman is much more sexually adventurous than less educated woman
    - Women's sexuality is much more affected by culture than men's sexuality is
    - Men: there is no significant difference between those with high education and low
    - Religion seems to also affect women more than it will affect men
    - For men, early on, it is clear that they are either hetero or homosexual.
    - For some women, they can switch back and forth. This is why they say women's sexuality is more fluid and less rigid than men's

E.2: Environmental causes for homosexuality?

- Dominant or absent mother?
    - Based on research, no, it has nothing to do with it

- Absent father makes a male gay?
    - No.

- Fear of or hatred for opposite sex?
    - No.

- Hormones CURRENTLY in blood?
    - No.

- Previous sexual abuse?
    - No.

- Modeling? (raised by gay parents?)
    - No.

- By default? (couldnt find someone of the opposite sex, so they choose it?)
    - No.

E.3 : Biological causes?

- Genes: there seems to be a genetic component to homosexuality
    - Identical twins are more similar in their sexual orientation than fraternal twins are. However, genes do not explain everything, they are only a portion
    - Experiment with heterosexual male fruit flies: manipulating the genes, change sexual behaviours

- Prenatal hormones:
    - Idea: that while pregnant, hormonal changes within the body will rewire the baby's brain to make it grow up with different sexual orientation
    - In the womb (for rats and sheep) there is evidence that hormones will change the brain somehow
    - Humans? However, sometimes, naturally, women experience hormonal problems, and sure enough when researchers follow up on this they find changes in sexual orientation
    - **Exposure to female hormones more than normal:** male or female predisposition to be attracted to males later on

- Fraternal birth order
    - Men with older brothers have a higher probability of developing a homosexual orientation

    - Probability of first sons to be homosexual is 3%
    - With every son, it goes higher
    - Researchers believes that this MAY be because with every pregnancy the uterus environment changes

- Brain: researchers have found that one part of the hypothalamus that is linked with sexuality is larger in straight men than it is in gay men and straight women
    - Is this a result OF sexual experience, or is it the cause?
    - Recent studies: cerebrum asymmetry
        - Found: in straight men and gay women, the right hemisphere than the left hemisphere. Whereas in straight women and gay men, the right hemisphere and left hemisphere are similar sized
        - Amygdala: in straight men and lesbians, blood flow is higher from the amygdala to aread connected to hostility and anger; in straight women and gay men there is higher blood flow to fear and anxiety
    - These tests prove genetic, because they happen in the womb. This clearly indicates that sexuality is a biological cause

- Animal Kingdom: researchers have studied 1500 species, and almost all of them have homosexuality within them
    - Homosexuality may be adaptive, protect young, peaceful

E.4 Sexual prejudice

- Discrimination against a person just because of their sexual orientation
- Homosexuals have the highest rates of suicide and depression because of the attitude of the community

F. Sex and Human Values

- Researchers do their tests objectively, however as researchers we bring our own values to the table
- Different values will make you change your decisions

IV. The need to belong

- A fundamental human need to be loved, and love.
- If you are convinced your friends and family love you, support you, appreciate you for who you are, you have won the lottery of life.
- When we feel loved and appreciated, we are mentally, physically, emotionally healthier.

Advantages:

- Healthier
- A healthy marriage/ relationship is a better predictor of future physical health than levels of cholesterol!

Disadvantages:

- Because we have such a powerful need, we do stupid things to belong
- Stick in abusive relationships, form inappropriate attachments
- Comply
- Commit suicide

Earn a point

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B.1: Sexual response cycle: study in the book

Lecture 17 V. Motivation at work

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A. Introduction

- Work fulfills a number of different needs
  - Make money
  - Derive a sense of identity from our job
    - In social situations, in addition to what your name is, they ask you what you do
  - Derive a sense of competence when we do a job well
    - This is important for wellbeing, self esteem, etc.
  - Gives a meaning and purpose from what they do
  - Sense of belonging

- Work:
  - Job: doing it just to make money
  - Career
  - Calling: doing something you are very passionate about, at the same time it has social value
    - Ex. Social work is your passion- you go ahead and do it. Since you are passionate towards the work, it affects other

  - Flow (Dr. Csikzentmalyi): noticed that people who love what they do go into a state of flow for their work
    - So into their work, lose sense of time, space and self
    - They give their all, but are very relaxed too

- Industrial-organizational psychology
  - In this field, psychologists do two things:
  1. Do research: research human behaviours in the workplace
  2. Apply psychological principles to the workplace

B. Personnel Psychology

- Definition of personnel psychology: hired by organizations in order to make sure the right person is hired for the right job, and involved in the evaluation of the employees.
- It takes more than just education to do a job well

B.1: Harnessing Strengths

- Personnel psychologist anlayze a job: pay attention to all the demands and requirements of the job
- Observe who is doing the best job, and find the skills necessary for that job itself

B.2 Do Interviews Predict Performance?

- Depends on the interview!
- If the interview is unstructured, it is not a good predictor of job performance
  - What is an unstructured interview?
  - Interview you go to, where the interviewer completely controls the interview
  - Subjectively, the interviewer decides what questions to ask you. The conversation can go anywhere, and has no direction
  - People who do these interviews tend to perceive themselves at very good at interviews and picking the right people for the job. However **research does not support this**
  - **This is called the "interviewer illusion"**

- Why do they think they're so great?
  - When people come for an interview, they come with their **good intentions**. However, good intentions don't always translate into action.
  - Interviewers tend to follow the careers of people they have selected rather than those that have been rejected. **Careers of those hired vs. Those rejected**
  - **Wysiwyg**: assume that what you see is what you get.

- Moods and preconceptions make a big difference.
  - Depending on the interviewer's mood, the interview can go in a different direction

- Remedy:
  - Do simulated work situations
  - Info on past performance: the best predictor of future behaviours are past performance
  - Multiple interviews: different interviewers, multiple perspective
  - Administering tests: tests to aptitudes for the job in question
  - In addition: develop job-specific interviews
    - **Ex. Structured interview:**
      - It is not subjective
      - List of questions predetermined, based upon the job, every single person who comes to the interview gets the same questions inn the same order
      - Interviewer asks question, as you answer they write it down, asks for clarification where necessary
      - ➢ This type of interview enhances reliability and validity
      - ➢ Doubles the predictive accuracy

B.3 Performance appraisal

- Can be very subjective process, with lots of errors possible
- Bias
  - Halo errors: boss is affected by a personality trait. It has nothing to do with performance, but that affects how your performance is appraised
  - Leniency and severity errors: some supervisors are simply lenient in general. Others are harsh with everyone always.
  - Recency errors: a single error was made, so when going to appraise the person they focus on the one wrong deed

- 360degrees feedback: some organizations use this feedback
  - Ex. The employee evaluates himself, the colleagues evaluate them, the boss evaluates them, and the subordinates evaluates them

C. Organizational Psychology

- Definition: organizational psychologists
  - Hired by organizations in order to determine what needs to be done to create environments where employees are motivated, engaged and satisfied
  - They also do research to determine what are the best qualities of a leader. In order to do research on this, they also help existing managers to become better managers and leaders

C1 satisfaction

- **Achievement motivation:** people with achievement motivation very much need/ are driven about excelling. They want to compete not only against others, but also against themselves to constantly improve.
- Why do we want employees to be satisfied/engaged?
  1. Based on research, organizations that have employees that are engaged/satisfied, are more successful financially than organizations where employees are not engaged or satisfied
     - Engaged and satisfied employees tend to be more creative, productive, persistent, less likely to be absent, less likely to leave organization
  2. People who are satisfied and engaged at work tend to be mentally and physically healthier.
     - They are also more satisfied with their lives

C.2 Managing Well

C.2.1 Harnessing Job-Relevant Strengths

- A good manager does not focus on your weaknesses and waste time on it
- A good manager will focus on your strengths, tell what you're good at, and cultivates the strength

- Uses those strengths to the maximum

C.2.2 Setting Specific and Challenging Goals

- Be specific with the goal
- Make sure the goal is challenging because if it is not enough challenging, you will not be motivated to follow through. If it is too challenging, you'll be overwhelmed, anxious, and you won't be confident to reach it
- **Implementation intentions:** people who have implementation intentions re more likely to succeed. You say when, where, and how you are going to achieve the goal
- **Progress report:** in addition to having specific and challenging goals, and implementation intention, it is important to have progress reports: where are you with your progress, so you can make adjustments and continue

C.2.3 Choosing an Appropriate Leadership Style

- Task leadership: these leaders are task-masters
  - Example General with soldiers.
  - They lead the charge, they decide what goal to pursue, who does what/where/when. They are on top of employees, follow up on everything, and they are the ones in control. Micromanagement
- Social Leadership: leaders who have a democratic style of leadership
  - Do sit with employees, together set goals, set the boundaries, however within those boundaries they allow employees freedom to do the job as best they can.
  - Macromanagers
  - These are leaders who are good at creating groups that work well together
- Transformational leadership: those that are highly charismatic, democratic in style, and not only have a vision, but they clearly communicate the vision to the employees
  - They do it in such a way, the employees become excited about the vision and adopt it for themselves
  - Become committed to the vision.
  - Employees no longer concerned with themselves, rather the goals of the leader become their own
  - Women more likely to be this kind of leader
  - Companies that have leaders that follow this style are most financially successful

- A good leader is someone who knows when to be a task leader and when to be a social leader

Lecture 17 Cont'd Chapter 12: emotions (497-526)

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I. Introduction

- Everyone has emotions!!
- When we talk about emotions, we talk about complex psychological processes, with 3 distinct components
  1. Physiological arousal
     - Ex. When we are angry, when we are afraid, palms sweat, heart beats fast
  2. Behavioural Expression
     - Ex. Mad= kick, scared- run
  3. Conscious awareness: knowing how you feel, and being aware of the thought processes involved
- The most important question: How do these 3 components fit together?

- Emotions can be adaptive. They are essential for survival
  - Because an animal is scared, it runs
  - If its angry, it defends
  - People, who due to brain damage or disease, that have lost their ability to feel emotions, yet their reasoning is fine, make disastrous decisions
- Can be maladaptive
  - Emotions that are too over the top: ex. Rage causes murder, sadness causes suicide

- There are two major dimensions of emotions that people classify with
  1. Valence: how positive or negative the emotion is
  2. Arousal: how much is this emotion associated with arousal in body functions. Ex. Joy, vs. Content
     - Most cultures have only these two

     - Japan has a 3rd:
  3. Interpersonal engagement: how much the emotion is linked and associated with our connection to others

II. Theory of emotions

A. James-Lange Theory

- Two people who had separate ideas but they came together

- What does Common sense tell us about the theory of emotions: If i'm out and I see a bear, i get afraid. Because i'm afraid, i'm going to run and my heart will beat fast.
  - Conscious awareness happens first, and then we have physiological arousal/expression
  - My heart beats fast because I'm afraid

- James-Lange:
  - We see the bear, we run, and heart beats fast
  - Physiological arousal + behaviour expression come first
  - Because my heart is beating fast, because I'm running, I conclude that I'm afraid
- Emotions are linked with distinct physiological arousal cues
  - Ex. Sadness has its own arousal, fear, sadness etc.

B. Canon-Bard Theory

- See the bear, and simultaneously we run/get afraid/heart beats fast
- Neither is the cause of the other
- Emotions are physiologically similar to each other

C. Shacter's Theory

- There are two major components to emotion
  1. Physiological arousal
  2. Appraisal/evaluation of the physiological arousal
- Believe that physiologically emotions are similar
- Ex. When you're mad or scared, your heart beats fast. So their reasoning is that you appraise the response in order to understand it

- Spillover effect: arousal from situation 1, is going to spill over/ affect arousal in situation 2
  - Enhance it, makes it stronger

III. Cognition and Emotion

- Ask the following question: what is the relationship between thinking and feeling?
- Do we think first and feel second, or do we feel first and think second?

A. Cognitive therapy

- Basic fundamental idea: there is no doubt about it, our emotions are the result of our thinking. You feel what you think
- Cognitive therapy helps you work on how you assess situations, evaluate situations, appraise situation

B. Zajonc

- Acknowledges that in some cases, cognitive therapy is true. Sometimes our feelings are the result of our thinking
- However, this is not always the case.
- Sometimes the emotional experience is so fast and quick, we feel long before we think about it
    - Ex. You walk into a dark room, you see something on the floor and you get terrified. You then turn on the light and see what it really was. And u understand it wasn't anything.. So this case you think after you feel
- Evidence: subliminal studies
    - Something flashed so quickly you consciously don't see it
    - Flashed neutral stimuli or scary stimuli very fast, so fast that if you ask the person what they saw, they say they saw nothing
    - In spite of this, when the stimulus was scary, the amygdala was activated
    - This indicates that at some level the emotional experience comes before the thought process
- Evidence: Neurological research: the amygdala sends more projects to the cortex than vice versa
    - Indicates emotions are so strong that they affect the brain before the brain can respond

C. Lazarus:

- Believed that even in instances where the emotion seems to come first, the brain is unconsciously assessing the stimuli

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IV. Embodied Emotions chapter 2

A. Emotions and the autonomic nervous system

Sympathetic Nervous system	Parasympathetic nervous system:
system that prepares us for flight or fight	- Calms the body down - Helps body conserve energy
Breathing is faster	
b.p is higher	
Pupils dilate	
ANS excites body for action	

B. Physiology of specific emotions

- **Science tells us both**
- Our emotions can be physiologically similar to each other
  - ex, when we are hpapy, afraid, angry- our heart beats faster for all three emotions)
- Research also indicates that emotions can be physiologically distinct
  - ex. Anger and fear both increase blood pressure, except blood pressure is higher with anger.
  - Also when we are angry, our body temperature goes up, whereas when we are scared, our body temperature goes down)
  - When we are depressed or sad (negative mood) this is linked and associated with high levels of activity in the right frontal lobe, on the other hand when we are happy/excited and pursuing goals are motivated: this is linked with high levels of activity in the left frontal lobes
  - Read examples in book: make table
Physiological similarities	Physiological differences

V. Expressed emotions

Nonverbal communication

- Nature intended us to communicate with each other using facial expressions
- Animals can pay attention to other animals facial expressions and body movements
  - Ex if a dog is bearing his teeth- it is telling you to stay away
  - If you stare the dog in the eyes, he will perceive it as a challenge
  - If you lower your eyes, the dog is not likely to attack you

- Facial expressions are innate and universal
  - How we know this? If you take blind children, who have never seen other people's facial expressions, when they are happy they smile - when they are angry they frown
  - Took pictures of westerners with different emotions on their faces, they took these pictures to a very secluded tribe that has never made contact with the outside world: they still recognized the different emotions

- Tone of voice: seems to play an important role for giving clues to what a person is

feeling/experiencing
    - Took syllables from a number of different foreign languages, mixed them up and made words that dont exist anywehre in the world
        - They hired actors to use these words, and convey different emotions using these words
        - They had judges listen to these fake words, and they were all capable of identifying emotion behind the words which indicates there could be an **acoustic profile** for emotions that are universal

❗ **Detecting and computing emotions**

Culture and Emotional Expressions

- Though basic emotions are innate, culture does make a difference as to how much, when, and where we express certain emotions
- Gestures differ from culture to culture, and they have different meanings

Gender

- Surveys tell us that people think that women are more emotional than men
    - In our book: that women felt emotions "deeper" than the men did
    - Not in our book: a number of different studies clearly indicate that when it comes to the experience of emotions, men and women do not significantly differ. We do not differ in the terms of the emotions we experience (in terms of sadness, anger) in some studies, they hooked them up to electrodes and measured what was happening in the body during emotional changes - there were no physiological difference in the experience between men and women
- We differ in the expression itself (not experience or intensity)
    - We as women have more freedom to express our emotions such as sadness, fear, pain
    - Men have more freedom to express anger

Effects of Facial Expressions

- In addition to facial expressions being a nonverbal form of communication, they also seem to influence emotions themselves
- If you put a smile on your face (genuine) and you keep it there, you are likely to become happy
- Study: had one group read comics with different facial expressions, it showed that the emotions were enhanced based on the facial expression they used

VI. Experienced Emotions

A. Fear

- Can be adaptive
    - When an animal is afraid, it runs and saves its life
- Can be dysfunctional and maladaptive
    - Some people become so afraid of normal things, they alter their actions that is not helpful/cripples them/ interferes with healthy functioning
- Can be deadly: medical cases that people have dropped dead from just the fear of a situation
- Can be learned
    - Through classical conditioning
    - Through observation

- We are biologically prepared to fear certain things more than other things

- Any fear that helped our ancestors survive and transmit their genes into the future, is a fear that will be observed in modern times
- Patterns are found the same around the world
- Study: monkeys in the wild are scared of snakes. However monkeys born in labs are not afraid of snakes
  - They made a video of the expression of monkey after looking at a snake
  - They then made a video of the same expression against the flower
  - They showed these videos to the lab monkey, and the monkey only had a fear to the snake not the flower! Which shows biological preparedness

- Genes: show a relation to the fear of certain things
  - People who are more afraid/anxious of things, they show a higher functioning amygdala

B. Anger

- Anger can be healthy, and is an important emotion
- The problem is not the emotion itself- its what we do with the emotion

What makes us angry?

- Injustice
- Betrayal
- Helplessness

Catharsis Hypothesis

- The idea that either through fantasy or real action, by letting out our anger we release it
  - Ex. By venting, calling names, breaking things, imagining yelling at someone
- Does it work?
  - Temporarily, yes
  - **However: long-term** venting anger, yelling, screaming, (based on research) when we vent through this way, we tend to become angrier, more cruel, and more vengeful

"Venting to reduce anger is like using gasoline to put out a fire"

- Best way to get rid of anger:
  - Don't suppress, don't pout, don't yell and scream, don't ruminate
  - Step out of the situation, find a way to physiologically calm down
  - Once the body is physiologically calm, ask yourself why are you actually angry?
    - Is it really a problem, or is it a problem with my own issues?
  - Once you have determined the problem, you need to approach the situation calmly and address it
- Anger covers up pain and frustration

- Remember forgiveness
  - People make the big mistake about forgiveness: forgiveness does not mean you forgive the person who is abusing you
  - Forgiveness would mean leave the relationship, let go, forgive
  - Based on studies, when we genuinely forgive, the body calms down

C. Happiness

- Based on research, happiness is linked/associated with a number of positive correlates

- When we are happy, we are kinder/gentler to other people in our lives
    - We are better citizens
    - We are more likely to help others
    - We are more productive
    - More creative
- Choose goals that are more interesting/challenging/exciting
- Tend to work on really blossoming as a person
- Pursuit of happiness is a good thing

Positive psychology

- Researchers and psychologists studied negative emotions/ dysfunctions mostly, for a very long time
    - They paid little attention to joy, optimism, happiness
- Now there is a huge interest in positive human emotions

➢ Subjective wellbeing: how can you foster it?
    - It is the combination of happiness and satisfaction with life

- Feel-good, do-good phenomenon: when people are happy, they are more likely to help other people
- Adaptation-level principle: as we live our lives and as the circumstances change, we tend to adapt to these changes/circumstances, and they become our new normal
    - They become the measure that we use to judge and evaluate incoming stimuli
    - Example: if our normal winter is -40 everyday for few months and it is our new normal. One day, we find 13 degrees, this looks way warmer than it actually is - as such, we wear short sleeves and we go outside
    - Example: its a hot summer, 30-40 degrees above zero, this becomes the new normal. After 4 months, it goes down to 13 degrees, we find it extremely cold and stay in!

- Relative deprivation principle: we feel relatively deprived when we compare ourselves to those who are doing better than us
    - Advice: if you want to compare yourself to someone doing better than you, do so in order to become inspired
    - Ask the question: what does research tell me? What do I need to pursue to really be happy?
        - A certain amount of money is definitely needed to meet our basic needs
        - Research makes clear: After a certain point, the pursuit of money and making money/ status does not make you happier
        - The happiest people/ most satisfied people: pursue closeness with others (friendships, relationships), personal growth and development, and community service
        -

Earn point

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- ○ Read examples in book: make table
  - ○

Physiological similarities	Physiological differences

- **Detecting and computing emotions**

Lecture 19 Chapter 8 - Memory

November-30-11
11:47 AM

I. Introduction

- Memory is not a single process, rather it consists of multiple processes
- 3 of them
  1. Encoding
  2. Storage
  3. Retrieval
  - ➢ (see below)

- Definitely, memory is essential for survival. **It is definitely adaptive**
  - Think about it... What if we had noo memories? Would we even be able to know who we are, our values, our past experiences, our parents, know where to find food?- NO.
- At times however, memory can also be maladaptive
  - People who live in warzones for example, they get **post traumatic stress disorder.**
  - As a result, they relive their traumatic memories over and over again

II. Encoding Information

- Encoding is acquiring/ getting/inputting information
- There are several ways to encode information

1) Automatic processing: put no conscious effort into acquiring the information.
   - Ex. Remember what you ate for dinner last night
2) Effortful processing: putting time, energy and effort into acquiring the information
   - There are several ways of doing this

2.1: rehearsal: consciously repeating things time and time again

- Ebbinghaus was the first to study memory scientifically
  - He created nonsense syllables
  - Das-baz-xir
  - He would at random choose some to study, and he would rehearse them over and over
  - He kept record to see how many times he had to rehearse them, in order to remember it
  - He then waited to see how long it took to forget them

- *"Next-in-line effect"*
  - Example: you go to see haddad, and she already has 5 students there, you= number 6. she starts with number 1-6. as each person goes, you listen and you rehearse what they have all said. As soon as you get next in line, you start becoming self -conscious, focus on yourself, focus on what you'll say... And as a result, you don't really focus on the people that were right before you. When asked later, you will most likely remember what the first few people have said, rather than the later few.

- "Serial position effect"
  - When given a list of things to remember, we are more likely to remember the first few and last few words
  - We will remember the last few words better because of **recency effect**
  - The first few words we will remember better than the middle words because of **primacy effect.** Because they were the first few words we heard, and the words we had the most time to rehearse. We are also more likely to remember the first few words long term because we rehearsed them more than the other words

- "spacing effect" (good for studying purposes!)
  - Instead of studying your material 2 days before the exam, it is better to study and re -study, and re-study at different points in time during the semester
  - By doing this, you are more likely to remember the information for long term

- "testing effect"
  - When we are tested and re-tested and re-tested upon the same material, we are more likely to remember it better than if we studied it and restudied it etc.
  - Therefore, instead of just re-studying things, test yourself

2.2 Elaborative processing: you focus on the meaning rather than studying a string of words
  - After you focus on the meaning, elaborate on the information : ex. Generate questions, create stories and relate them to yourself

- Researchers ask: what is the best way to remember information?
  - Visually?
  - Acoustically?
  - Semantically? (focus on meaning?)
  - Researchers gave a person a word like "pen" - what does it look like, is it italic...
    - "Pie"- what does it sound like? (lie)
    - Money- give the word a meaning - The man gave his money to charity
  - They found that giving meaning to a word was more effective at remembering it
  - Based on ebbinghaus, when you give words meaning, it takes you 1/10th of the time to remember the words

- "Self-reference effect" : anything we relate to ourselves, we will remember better

2.3: Visual imagery processing
- When you are given information, do your best to visualize what you are learning
- Ex, piano lion cow, car, - lion lying on a piano, eating a cow that drove a car
- Ex: fire-global-interest-table-coherent-prostitute. What are you most likely to remember? Fire, table, prostitute. Why? Because you can actually visualize what these words are rather than global, coherent… Which are not physical words

2.4 Organizational processing
- Chunking: chunk information into units/pieces
  - Ex: 12415376124 easier to remember as 1-241-637-6124
  - Using acronyms- ex. Roy g. biv

- Hierarchies: when you put info into hierarchies, you put more meaning and effort into it which makes you more likely to remember it

- Categories: organize words into them!
  - Ex. Peach-cow-chair-apple-table-cherry-lion-couch-horse-desk
    - Fruits: cherry, peach, apple
    - Furniture: chair, table, couch, desk
    - Animals: cow, lion, horse

- Mnemonic devices: any technique we use to help us encode and retrieve information
  - Any sort of categorizing

III. Storage
- Keeping/saving information in memory for later use

A. Sensory Memory
- Definition: when our sensory systems register a lot of information in our environment. The senses can hold onto this information for a short amount of time.
- Researchers believe that every sense has a memory

The capacity for sensory memory is HUGE, but they hold onto it only for a small amount of time
- Sperling (1960): grad student that was fascinated by sensory memory

- Wanted to know how long our senses can hold onto information from our environment
- How he did it:
    - He would flash letters very fast in front of a person's eyes. He would then ask them what they would see
    - On average, they could only remember 4-5 out of 12
    - However, his subjects kept telling him that they saw all 12 letters, however as they started telling him the letters, the image started fading from their minds

    - He changed the test
        - If you hear a high pitch tone, tell me about first row. If you hear low pitch, tell me last row. If you hear medium pitch tone, tell me middle row
        - If they did that, they were able to do 3 out of 4 from the row, but it was necessary to do this VERY FAST right after they were shown
        - ➢ **This indicates that for a brief moment in time, the eyes can hold on to certain images.**

    - **Anything we pay attention to from sensory memory will move to short-term memory**

- Iconic sensory memory
    - From visual memory
    - Lasts a quarter second to half a second, maximum

- Echoic memory: (audition memory)
    - From ears
    - Lasts a bit longer, your ears will hold onto the information from three to four seconds

B. Short term memory

- Anything you are currently aware of/ conscious of, this will be in your short-term memory
- Also known as **working memory**

- Capacity: you can remember seven items +/- 2 --> very limited!
- Duration: 20 seconds, maximum! In order to remember something, you need to rehearse it

- Peterson & Peterson
    - Recruited people to come to the lab and when they got there, they gave them consonants
        - In order to stop them from rehearsing, they asked them to count from 100 backwards, then they would check how long it would take them to remember/ forget it

C. Long term memory

- Storing information in memory, for long periods of time

- **Long-term potentiation**
    - When we learn something new, when we form new memories, our brain is going to change
    - The neurons involved in formation of memory will change both structurally, and functionally
        - Structurally: the existing synapses could get stronger, new synapses could form, new dendrites can form
        - Functionally: neuron increases ability to create neurotransmitter, and it can release more/less of it. As a result, this will strengthen the connection between the neurons, and increase and strengthen the firing potential

- **Stress and memory**
    - Acute stress: tends to enhance new memories. Because when we are stressed, the body releases stress hormones like cortisol and epinephrine. This has been proven to increase memory storage. When stress hormones are blocked, the memories are weakened.
        - Researchers think that stress hormones are involved with **flashbulb memories.** They are vivid memories of events that are shocking, traumatizing, etc.
        - ➢ Footnote: just because a memory is vivid, doesn't mean its necessarily accurate

- Chronic stress: when we are chronically stressed, we are chronically circulating cortisol. HOWEVER, TOO MUCH/TOO OFTEN WILL KILL NEURONS in the HIPPOCAMPUS.
  - Hippocampus is a structure in the limbic system, that is linked and associated with learning and memory

- New vs. Old: sometimes stress makes it hard to remember things that are old.
  - It could negatively influence the retrieval of information

- **There are two types of long-term memory!**
  1. Explicit long-term memory: memory with awareness, with consciousness
     - Hippocampus involved with this. When the hippocampus is damaged, this type of memory is affected
  2. Implicit memories: memories without consciousness, without awareness. You don't remember that you have those memories!
     - If we dont remember we have them, how do we know we have them?
     - We know we have them because they influence and affect our skills or actions
     - Even people with alzheimers (depending on the level of alzheimers) are capable of having implicit memories
     - The cerebellum is what is linked and associated with implicit memories

Lecture 20

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IV. Retrieval: getting the info out

A. Definitions

- **Retrieval**= getting information out of storage
- **Retrieval cues**= any hints or any clues/ prompts that will help us retrieve information from memory
- **Recall**= memory task where we are asked to remember something without being given retrieval cues
  - Ex being asked: what is the definition of retrieval cues?
  - Ex: essay questions
- **Recognition**= memory task where we are given specific cues, and it is our job to find out which is the right answer
  - Ex. Multiple choice questions
- **Priming=** when exposure to a specific clue is going to help facilitate and enhance the retrieval of another one
  - Ex: black-white, bread-butter

➢ A memory rule to enhance memory retrieval: make sure that the circumstances at the moment of recall match the circumstances at the moment that you learn the information (see B and C below)

B. Context Effects

- If you can, match the context at the retrieval as the context at the moment of learning
  - Based on research: when students do their exams in the same room as where they learnt information, students will do better than when they do their exam in another room

C. Mood and memories

- There seems to be a link between mood and memory

c.1 state-dependent memories

- You want to enhance retrieval so make sure the mood at the moment of retrieval is the same at the moment of learning

c.2 mood-congruent memories

- When we are happy, we tend to retrieve happy memories; when we are sad, we are more likely to retrieve sad memories etc...
- Whatever mood we're in, that mood will enhance memories that are in line of that mood

V. Forgetting

- Sometimes forgetting is a good thing
  - If you remembered every breakfast since you were born… Every single moment, word... Etc. It would be too much

- Why do we forget??
  - Medical reasons: brain injury (amnesia), brain diseases (Alzheimers),
  - Ebbinghaus (first scientist to study memory, used nonense syllables) forgetting curve: he tested how long it took people to forget information
    - After 1 hour, he remembered only 44% of nonsense syllables
    - After 1 day, he could remember 35% of nonsense syllables
    - After 1 week he could only remember 21% of nonsense syllables
    - He plotted his results, and created the Ebbinghaus forgetting curve
    - Other psychologists did tests to create a curve, and though the dates/numbers may not be the same, the shape remains the same in all testing situations

- Relearning
  - Ebbinghaus realized that when sitting down to re-study the nonsense syllables, that it took him

less time to learn it

- If we don't have medical reasons, why do we forget??
  - Researchers are not clear on this!
  - ➢ There are **5 key theories as to why we forget**

1. **Motivated forgetting:** the theory that information/events are so traumatic or anxiety-provoking/shaming, (i.e. very uncomfortable) you push the memory away and you will forget it
   - There are two ways of doing it:
     a) Suppression: pushing it away consciously
     b) Repression: pushing it away unconsciously
        - This is hotly debated

2. **Decay theory:** we tend to forget because sometimes, what happens with the passage of time, the memory trace will fade/weaken, as such the memory is not as strong

3. **Retrieval failure:** the information is there, you just have a hard time getting it out of storage.
   - Ex. At the tip of your tongue

4. **Interference:** pieces of information interfere with each other, and lead to forgetfulness
   - Two types
     a) Retroactive interference= backward acting: New information will interfere with old information
     b) Proactive interference= forward acting: old information will interfere with new information
        - ◆ Example: calling out someone else's name during sex.

5. **Encoding failure:** we forget because we did not properly encode the information in the first place.

VI. Memory construction

A. Misinformation and imagination effect

- Human memory does not work like a tape recorder: do not register information as is
- Human memories are constructed
  - Memories are going to change
  - Some info can be added, some can be deleted, and info can be merged
  - The memory changes, and we don't do it intentionally/consciously/on purpose

- **Elizabeth Loftus**
  - Famous memory researcher, she is an expert and is called on trials
  - Example of a study she did: invited normal people, made them watch a video of two cars crashing into each other.
    - After watching video, she asked them to write stuff about what they watched
    - Invited them again later, asked them to state again what they remembered
    - She gave them misleading questions:

	How fast were they going when they got into contact?	32 mph
□	How fast were they going when they hit each other?	34mph
	How fast were they going when they smashed each other?	41mph

      - □ Based on the terminology, their answers differed
    - They invited them again and asked: did you see broken glass? (there was none in the video)
      - □ Those people who were asked using "smashed" as the terminology, answered yes.
    - ➢ When we have experienced an event, and after we have experienced it we are exposed to incorrect information- it will change our memory

- **Schema:** preconceived guidelines of thought for a subject
  - These can also alter memories
  - Example: prof's office, asked them what they saw... Everything they listed didnt' even exist in the

room

- **Imagination effect:**
  - Example: parents told their kids 3 events that were real
  - Researchers brought kids into the lab and told them that the parents gave them 4 events
  - They told them that the 4th event was that they were lost in the mall
  - In the end, an elderly lady took them to the police station
    - This event did not happen!!
  - Later, they brought the kids back and asked them to recall all 4 events
  - At the end of the study, 25% of the students had vivid memories about the fabricated memory!
  - When researchers told them that the memory was not real, the kids actually believed they were real!

B. Source amnesia

- If we remember the information, but we don't remember where we heard/learnt it
  - We dont remember the source of the information
- We remember information, but we confuse the source
  - Ex. We heard something on CNN, but we dont remember it as cnn but something else like a friend.

- Repercussions of it?
  - After september 11th, president bush was asked: where were you when you were told about the first plane hitting the tower? He gave the incorrect answer
  - Because he said the wrong answer, people started making conspiracy theories

C. Discerning true and false memories

- This is a daunting task
- Just because a memory is vivid, consistent, persistent, very emotional- does not mean it is accurate
- Bottom line: both real and false memories can be vivid/real
- How can we determine which is real?
  - True memories tend to have more details to them than false memories
  - False memories you just get the gist of the memory

D. Children's eyewitness recall: read it twice

E. Repressed o constructed memories of abuse

F. Improving memory

- NOT ON EXAM:
- BEFORE WE START STUDYING ANYTHING, STUDY THIS IN THE BOOK TO HELP YOU STUDY!

Earn a point

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Children's eyewitness recall: read it twice

E. Repressed or constructed memories of abuse

How to study for final

November-21-11
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Chapter 1: thinking critically with psychological science

- Introduction: use notes only

i. The need for psychological science
   - a.1 Limits of intuition: N+B
   - a.2 Limits of common sense: n+B
   - a.3 overconfidence: N+B
   - a.4: illusory correlation: notes only
   - a.5 perceiving order in random events: notes

   B. Scientific attitude: NOTES
   C. Scientific method: notes only

ii. Types of research studies
   A. a.1 purpose: notes
      a.2 case study: notes
      a.3 survey: n+b
      a.4: naturalistic obs.: notes only

   B. Correlational research: notes

   c. Experimental: notes+book+ definitions on side of page

iii. Statistical reasoning
   a. Intro: notes
      a.1 purpose: notes
      a.2 examples: notes + figure 1.8
      a.3 measures of central tendency: notes+fig1.9
      a.4 measure variability: notes+book+ fig 1.10

   b. Inferential stats: notes+b

iv. f.a.q.:
   a. Objectives 10;11;12= main text,
      objectives 13;14= chapter review

Chapter 7:

I. notes
II. Notes + figure 7.6 + chapter review
III. Notes + book
IV. Notes + p. 321-323 in main text

Chapter 6: Sensation/ perception

Σ Sensation:

I. Basic principles: notes + previously assigned earn a point
II. Vision
   A. Stimulus: notes + figure 6.6 (understand what height, length, etc of wave means)
   B. The eye: notes + book + diagram of eye (understand all diff sections etc.)
   C. Visual information processing: notes

D. Colour vision: Notes

III. Hearing: NOTES+ BOOK (including diagram of ear)
IV. Other senses
    A. Touch: notes + book
    B. Smell: notes
    C. Taste/ gustation: notes
    D. Body position and movement: notes + book

Perception

I. Perceptual organization
    A. Intro: Notes+ book
    A. Form perception: notes
    B. Depth perception
        Intro: notes
        b.1 notes + book
        B.2 notes
    C. Motion Perception: notes
    D. Perceptual Constancy: notes + figure 6.39
II. Perceptual interpretation: Notes+ book- know examples well!
III. Is there ESP? : Notes + R1 main text
    - Study notes really well, then
    - R1 - read once the main text

Chapter 12: emotions (497-526)

I. Intro: Notes
II. Theories of emotions: notes
III. Cognition and emotions: notes+ book
IV. Embodied emotion
    A. Notes
    B. Notes+book
V. Expressed emotion:
    Nonverbal communication: notes+book
    Detecting and comupting emotion: **MAIN TEXTBOOK/ ORGANIZE THE INFORMATION**
    Culture and emotional expression: notes+book
    Gender: notes + figure 12.11
    Effects of facial expression: notes+book
VI. Experienced emotion
    A. Fear: notes
    B. Anger: notes
    C. Happiness: notes+book, look at graphs/tables

Chapter 3:

- From notes:
    - Hypnosis
    - Alcohol
    - Ecstacy
    - Cocaine
    - Influences on drug use
- Everything else: study from notes and book

Chapter 11 (motivation)

- notes: motivation at work
- Everything else: notes + book

Chapter 2:

- From notes:
  I. Function and structure
  II. A;B;D (Part c= notes and book)
  III. Intro + tools of discovery + C.2.2
- Everything else: notes + book

CHAPTER 8: study EVERYTHING for final exam

PROLOGUE: Study it!