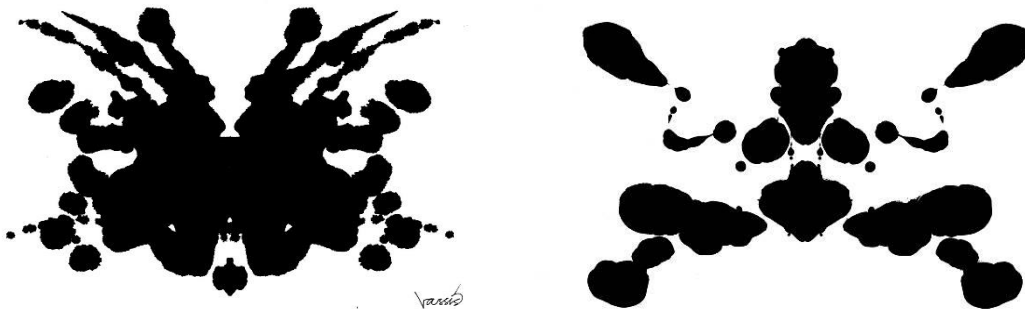


#21 Rorschach, Freudians, and Humanists

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

What do you see in this image? A scary face, a couple of squirrels fighting, or this one: a squashed frog or tumbling poodles, a bleeding bat? Hermann Rorschach wants to know. He wanted to know; he's dead now. He believed that your answers, what you saw in the ink, said something about your personality.



Rorschach was a Swiss psychoanalyst who in his youth was fascinated by the childhood game of making pictures out of ink blots called Klecksography. As an adult, Rorschach was intrigued with Carl Jung's use of word association in attempts to access patients' unconscious minds. Jung would ask patients to say the first thing that came to mind when they saw words like 'dead' or 'window' or 'abuse', and Rorschach thought "why not do the same thing with amorphous blobs?". So he'd show a patient a series of ink blots and record what they saw to determine how people projected their personal associations onto random shapes. Assuming there were important differences between those who saw dancing bunnies versus those who saw severed screaming heads, he drew conclusions about a patient's personality. And yeah, this was controversial.

Some clinicians still do think that the Rorschach test can be a helpful diagnostic tool when used correctly and cautiously. But others remain critical of the test, calling them unscientific and unreliable. *It's even been called the 'Dracula' of psychological tests because no-one has been able to drive a stake through its heart yet.*

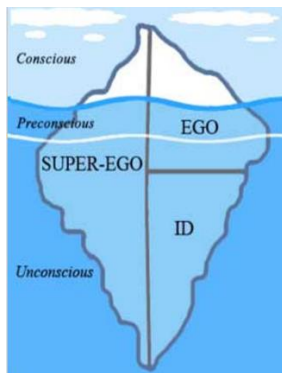
But love it or hate it, *the Rorschach test is one of the many methods psychologists have used in an ongoing quest to understand personality.* And of all the concepts we cover in this course, personality is one of the most complex, and one of the most contested.

We've always got to start out with defining things; Personality: you think you know what that means, but we're going to define it. *Your distinctive and enduring characteristic patterns of thinking, feeling and behaving defines your personality.*

And, guess what? As you might expect, there are a number of competing perspectives on personality theory.

The first, and one of the most influential, has been the Psychoanalytic Perspective. First championed by our coke loving, cigar chewing friend, Sigmund Freud. *It was through his clinical observation of patients that Freud came to theorize the existence of the unconscious.* For Freud, the unconscious represented "a vast reservoir of often unacceptable and frequently hard-to-tolerate thoughts, feelings, desires and memories." Usually involving lots of weird sex stuff.

Freud believed that our personalities are largely shaped by the "enduring conflict between our impulses to do whatever we feel like, and our restraint to control those urges," between our pleasure-seeking aggressive urges and our inner social control over them. He theorized our minds as being divided into three interacting parts: The ID, The EGO, and The SUPEREGO. That provide the battleground for this internal conflict that shaped our personalities.



Id:
Instincts



Ego:
Reality



Superego:
Morality

You can think of a classic Freudian mind like this iceberg. It's mostly hidden and that big underwater chunk is your ID, your unconscious, primitive and instinctive self. Freud thought the ID was all about sex and aggression, the so-called "Pleasure Principle" of immediate gratification.

To him, infants were all ID; that's in part why babies freak out when they don't get a snack, like, right now! Instead of just taking a deep breath for a second. For that matter, a lot of the off-the-wall celebrities and dictators are "Big IDs." Needs like a Honey Badger; they don't care.

Eventually, kids develop the EGO part of their personality that largely conscious component that's charged with dealing with reality. *The EGO works on getting the ID what it wants in a reasonable, timely and realistic way without, you know, getting*

arrested or beaten up.

The final aspect to form in Freud's personality trifecta is the SUPEREGO: the Jiminy Cricket voice of our conscience that represents not just the real, but also the ideal. As you can imagine, the SUPEREGO and the ID don't much like each other and it's up to the referee EGO to sort everything out. And it's hard to be the EGO.

Freud was convinced our personalities form in our first few years as we pass through a series of five psycho-sexual stages.

Infants start out in the *oral stage* because they get pleasure from eating. From there, a child enters the *anal stage*, focused on peeing and pooping, then onto the *phallic stage* as they discover their boy and girl bits. It was during this stage that Freud believed the infamous Oedipus complex reared up, characterized by a boy experiencing a form of sexual desire toward his mother and parallel jealousy or hatred of his father. Freud called from about age 6 to puberty the *latency stage*, marked by dormant sexual feelings which eventually evolved into the fifth and final adult *genital stage* of mature sexual interests.

Now, he believed if certain conflicts weren't resolved at any of these given stages, a person could develop a fixation, or a lingering focus on a younger stage, like if a baby was overfed or neglected and underfed, they might fixate in the oral stage. An orally-fixated adult might seek oral gratification through excessive eating or chain-smoking and may develop issues with dependency or aggression.

Now, of course, not everyone was onboard with Freud's model of personality development. Many of his ideas were controversial and remain so to this day.

Take *Karen Horney* for instance, a German-born psychoanalyst credited with founding feminist psychology. She wasn't down with the idea that our personalities are primarily shaped by sex and aggression. *She especially rejected the notion of penis envy which she thought was more than a little insulting to women. She actually proposed that womb envy may occur as much in men, who are envious they can't give birth.* She encouraged patients to take charge of their own mental health and engage in self-help and analysis, believing people were often able to be their own therapists, sort of.

Carl Jung, the famous Swiss psychoanalyst, was a friend and disciple of Freud, but eventually theoretical differences took them in different directions. He agreed that the unconscious was a powerful force, but he believed that it was more than just a holding cell for repressed sexual thoughts and feelings and memories. *Jung believed sexual drive was only part of the equation, and that we are also driven by a need to achieve a full knowledge of self.*

Vienna-born *Alfred Adler* was another former-collaborator of Freud who struck out on his own. Adler agreed with Freud that childhood was important but he emphasized ongoing social tensions, not sexual ones, as most crucial to the formation of sexuality. *He coined the term "inferiority complex" and believed that much of our adult behavior is linked to childhood struggles of feeling inferior.*

Rather than focusing on how messed up we can be, *humanistic theorists* focus on the basic goodness of people and how they strive to achieve their full potential.



Maslow's Pyramid

Abraham Maslow believed that we are motivated by a pyramid-shaped hierarchy of needs and that once basic needs are met, like food and shelter and whatnot, we're able to achieve higher goals. Maslow believed the top two rungs of that pyramid are where the real growth and personality takes place. First, with self-actualization, or the need to live up to our full, unique potential, and then with self-transcendence, or finding meaning and purpose and identity beyond ourselves. *Rather than study only troubled patients, Maslow looked at healthy, creative types with whom he discovered this common thread of self-actualization.*

American psychologist *Carl Rogers*, another pioneer of humanistic theory proposed a person-centered perspective on

personality. Like Maslow, *Rogers believed* we're all basically good so long as we're nurtured in a growth-promoting environment. *Such an environment required three conditions: The first is genuineness, the idea that parents and teachers should be transparent and open with their feelings. Then, there's acceptance. When folks are accepting, people around them won't be afraid to be themselves or make mistakes, and the third requirement, according to Rogers, is empathy, or the ability to share others' feelings and reflect their meanings.*

So, psychoanalytic and humanistic theories of personality were and are incredibly influential, even if one was a little sordid and the other a little sunshine-and-rainbows.

Today, you learned about personality theory and two of its early schools of thought: the psychoanalytic theory, including Freud's model of the mind, along with the Neo-Freudians. You also learned about the humanistic theory, including Maslow's model of self-actualization and Rogers' person-centered perspective.

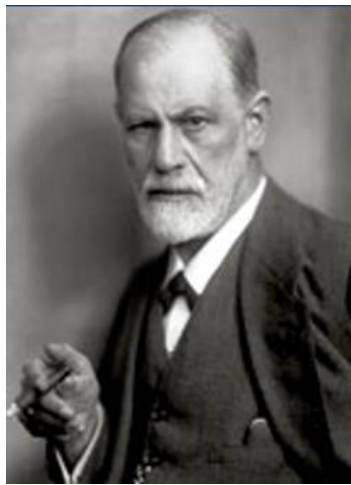
#22 Measuring Personality

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

We have read about how psychologists often study personality by examining the differences between characteristics, and by looking at how these various characteristics combine to create a whole thinking, feeling person. *The early psychoanalytic and humanistic theorists had a lot of ideas about personality, but some psychologists questioned their lack of clearly measurable standards.* Like, there was no way to really quantify someone's inkblot response, or how orally fixated they might be. So this drive to find a more empirical approach spawned two more popular theories in the twentieth century, known as the *trait* and *social cognitive* perspectives.

Instead of focusing on things like lingering unconscious influences or missed growth opportunities, *trait theory researchers look to define personality through stable and lasting behavior patterns and conscious motivations.*

Legend has it that it all began in 1919, when young American psychologist Gordon Allport paid a visit to none other than Freud himself. Allport was telling Freud about his journey there on the train, and how there was this little boy who was obsessed with staying clean and didn't want to sit next to anyone or touch anything. Allport wondered if the boy's mother had a kind of dirt phobia that had rubbed off on him. So, he's telling his tale, and at the end of it Freud looks at him and says, "Mhmm.. Was that little boy you?" Allport was basically like, "No, man, that was just some kid on the train. Don't try to make this into some big unconscious episode from my repressed childhood".



Id:
Instincts



Ego:
Reality



Superego:
Morality

Allport thought Freud was digging a little too deep, and that sometimes you just need to look at motives in the present, not the past, to describe behavior. So Allport started his own club, describing personality in terms of fundamental traits, or characteristic behaviors and conscious motives. He wasn't so much interested in explaining traits as he was in describing them.

Modern trait researchers like Robert McCrae and Paul Costa have since organized our fundamental characteristics into what's casually known as The Big Five: openness, conscientiousness, extroversion, agreeableness, and neuroticism, which you can remember using the mnemonic OCEAN. Each of these traits exist on a spectrum, so, for example, your level of openness can range, on one end, from being totally open to new things and variety, or wanting strict, regular routine on the other end. Your degree of conscientiousness can translate into being impulsive and careless, or careful and disciplined. Someone high on the extroversion end will be sociable, while those on the low end will be shy and reserved. A very agreeable person, meanwhile,

is helpful and trusting, while someone at the opposite end may be suspicious or uncooperative. And finally, on the neuroticism spectrum, an emotionally stable person will be calm and secure, while a less stable person is often anxious, insecure, and self-pitying.

disorganized careless impulsive	conscientiousness	organized careful disciplined
ruthless suspicious uncooperative	agreeableness	soft-hearted trusting helpful
calm secure self-satisfied	neuroticism (emotional stability vs. instability)	anxious insecure self-pitying
practical prefers routine conforming	openness	imaginative prefers variety independent
retiring sober reserved	extraversion	sociable fun-loving affectionate

The important idea here is that these traits are hypothesized to predict behavior and attitude. Like an introvert might prefer communicating through e-mail more than an extrovert, and an agreeable person is much more likely to help their neighbor move that couch than a suspicious one who's just glaring through the window. By adulthood, trait theorists will tell you these characteristics are pretty stable, but it isn't to say that they can't flex a little in different situations. Like that same shy person might end up singing Elvis karaoke in a room full of people under the right conditions. *So our personality traits are better at predicting our average behavior than what we'd do in*

any specific situation, and research indicates that some traits, like neuroticism, seem to be better predictors of behavior than others.

This flexibility that we all seem to have leads to the fourth major theory on personality, the social cognitive perspective.

Originally proposed by our Bobo-beating friend Alfred Bandura, the social cognitive school emphasizes the interaction between our traits and their social context. Bandura noted that we learn a lot of our behavior by watching and imitating others. That's the social part of the equation. But we also think a lot about how these social interactions affect our behavior, which is the cognitive part. So, in this way, people and their situations basically work together to create behavior. Bandura referred to this sort of interplay as reciprocal determinism. *Meaning, that for example, the kind of books you read or music you listen to or friends you hang out with say something about your personality, because different people choose to be in different environments, and then those environments in turn continue to reinforce our personalities.*

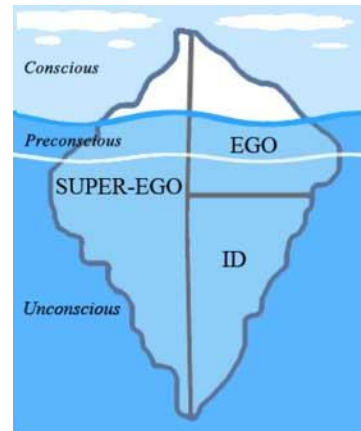
So if Bernice has a kind of anxious-suspicious personality, and she has a serious, titanic crush on Sherlock Holmes, she might be extra attuned to potentially dangerous or fishy situations. But the more she sees the world in that way, the more anxious and suspicious she gets. In this way, we're both the creators and the products of the situations we surround ourselves with.

That's why one of the key indicators of personality in this school of thought has to do with our sense of personal control -- that is, the extent to which you perceive that you have control over your environment. *Someone who believes that they control their own*

fate, or make their own luck, is said to have an internal locus of control, while those who feel like they're just guided by forces beyond their control are said to have an external locus. Now whether we're talking about control versus helplessness, introversion versus extroversion, calm versus anxious, or whatever, each of these different personality perspectives have their own methods of testing and measuring personality.

Hippocrates' Four Humors

- **Blood:** considered to be made by the liver.
- **Phlegm:** associated with the lungs.
- **Yellow bile:** associated with the gall bladder.
- **Black bile:** associated with the spleen.



We've talked before about how the psychoanalyst Hermann Rorschach used his inkblot test to infer information about a person's personality; we know that Freud used dream analysis, and both he and Young were both fans of free association, but *the broader school of theorists, now known as the psycho-dynamic camp that descended from Freud and pals, also use other projective psychological tests, including the famous thematic apperception test.*

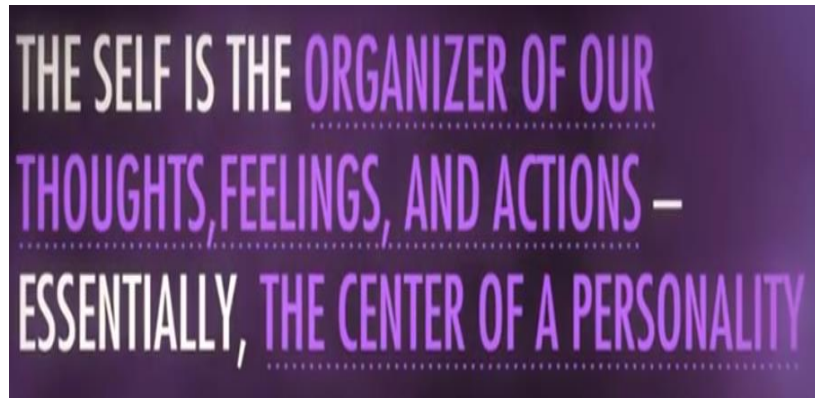
In this kind of test, you'd be presented with evocative but ambiguous pictures, and then asked to provide information about them. You might be asked to tell a story about the scenes,

considering things like how are the characters feeling, or what's going on, or what happened before this event and what will happen after. Like check it out, is the woman crying because her brother just died, or from a bee sting? Or is she a maid laughing because some royal just passed out drunk on his bed, or perhaps the object of her long-burning affection has just confessed his love in a fever haze and she's having a mini-breakdown in the hall?! *The idea is that your responses will reveal something about your concerns and motivations in real life, or how you see the world, or about your unconscious processes that drive you.*



By contrast with that approach, though, modern trait personality researchers believe that you can assess personality traits by having people answer a series of test questions. There are lots of so-called personality trait inventories out there. Some provide a quick reading on a particular enduring trait, like anxiety or self-esteem, while others gauge a wide range of traits, like our friends The Big Five. These tests, like the Myers-Briggs, which you might have heard of, involve long questionnaires of true-false or agree-disagree questions like, "Do you enjoy being the center of attention?", "Do you find it easy to empathize with

others?", or "Do you value justice over mercy?" *But the classic Minnesota Multiphasic Personality Inventory is*

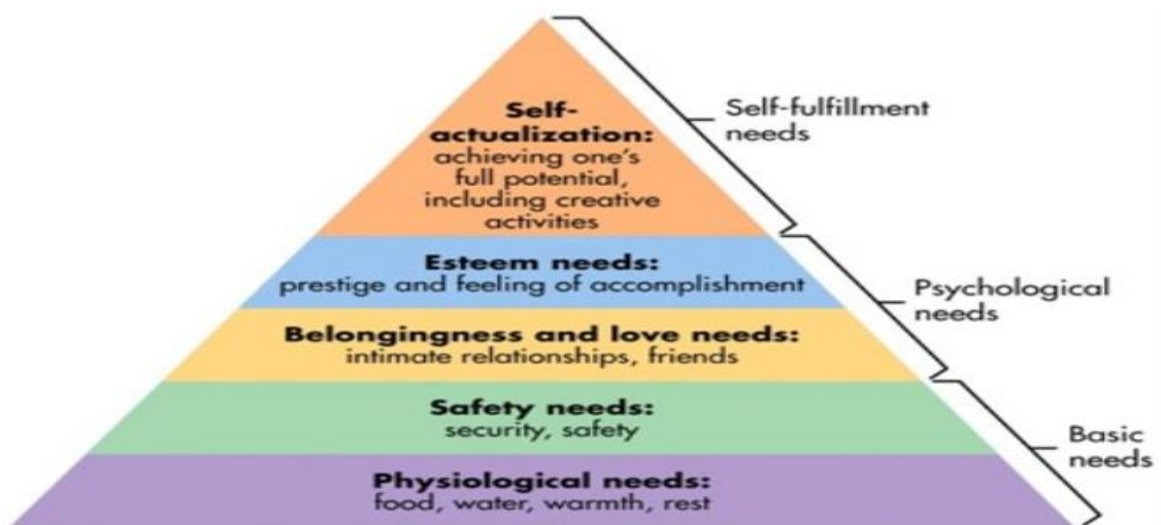


probably the most widely used personality test. The most recent version asks a series of five hundred and sixty-seven true-false questions, varying from "No one seems to understand me" to "I like mechanics magazines" to "I loved my father", and is often used to identify emotional disorders.

Then there's how Bandura's social cognitive camp sizes you up. Because this school of thought emphasizes the interaction of environment and behavior rather than just traits alone, they aren't solely into questions and answers. Instead, they might measure personality in different contexts, understanding behavior in one situation is best predicted by how you acted in a similar situation. Like, if Bernice freaked out and tried to hide under the bed during the last five thunderstorms, we can predict that she will do that again next time. And if we conducted a controlled lab experiment where we, say, we looked at the effects of thunderstorm noises on people's behavior, we might get an even better sense of what baseline psychological factors could best predict storm-induced freak-outs.

And finally, there are *the Humanistic theorists like Maslow. They often reject standardized assessments altogether. Instead, they tend to measure your self-concept through therapy,*

interviews, and questionnaires that ask subjects to describe both how they would ideally like to be and how they actually are. The idea is that the closer the actual and ideal are, the more positive the subject's sense of self.



Which brings us back to that biggest mother-lode question of them all: Who, or what, is the self?

All the books out there about self-esteem, self-help, self-awareness, self-control, and so on are built upon one assumption: that the self is the organizer of our thoughts and feelings and actions: essentially the center of a personality. But of course, it's a sticky issue. *One way to think about self is through the concept of possible selves, like your ideal self, as well as your most feared self, the one who could end up unemployed and lonely and rundown.* This balance of potential best and worst selves motivates us through life. In the end, once you factor in environment and childhood experiences, culture and all that mess, not to mention biology which we haven't even touched on today, can we really firmly define self? Or answer

certainly that we even have one? That, my friend, is one of life's biggest questions, and so far it has yet to be universally answered.

But you learned a lot anyway. As we talked about the trait and social cognitive perspectives, and also about different ways these schools, and others, measure and test personality. We also talked about what self is, and how our self-esteem works.

#26 Emotion, Stress and Health

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

What do you think this person is feeling? How about him? And her? What about this one? It's not really hard to tell, is it? Most of us are better than we think at reading non-verbal cues and subtle expressions. *The understanding among some, but not all psychologists, like emotion expert Paul Ekman, is that facial expressions are culturally universal.* So, a Greek, Britain, American, Samoan, or Nigerian would all be able to discern the same basic emotions - happiness, sadness, disgust, anger, fear, and surprise, just by looking at your face.

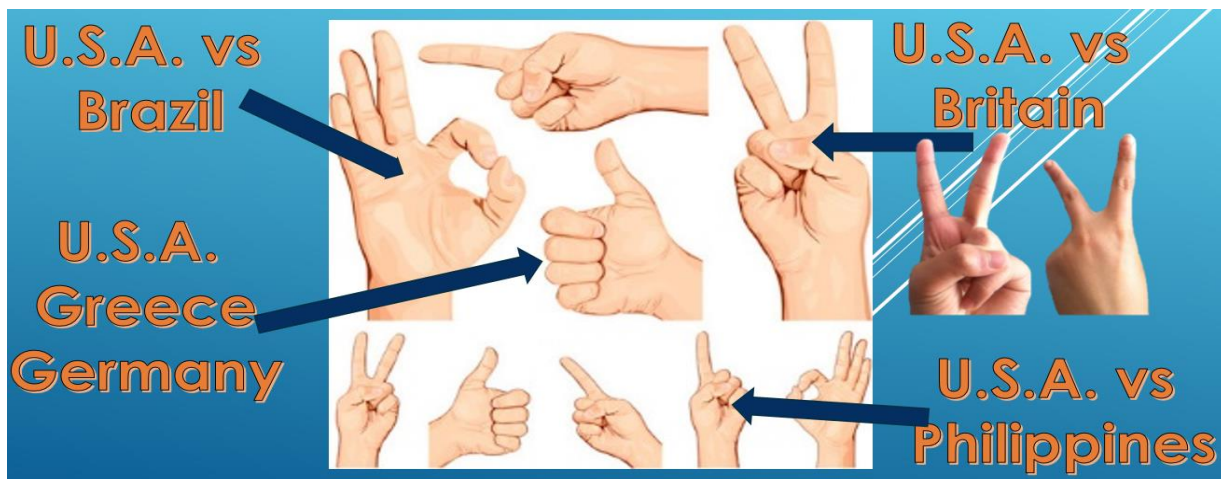


And our expressions don't just communicate emotions, according to the facial feedback hypothesis, they can help regulate our emotions, too. The act of smiling broadly, even if you aren't happy, can actually lift your mood just as scowling can lower it. This is how a recent randomized controlled clinical trial suggested that a little Botox injection in the forehead might actually lessen depression. Because it's hard to feel down if your frowning muscles are frozen. Of course, whether your face is

paralyzed or not, some people are better at reading your emotions than others. *For example, introverts are usually better at interpreting people's feelings, while extroverts are often better at expressing them.*

And you've probably heard embarrassing stories, or even experienced first-hand how different cultures express emotions through particular gestures that are far from universal.

For example, in the United States, this is a peace sign, but you don't wanna flip it around in the UK, and *the iconic thumbs up gesture means "good job" in many cultures, but if you toss that thumb around in Greece, let's just say you won't make any new friends.*



But of course, emotions involve a lot more than making faces and hand gestures - they're also about our conscious experience of what we're feeling. So, how do we actually feel all these feels, and how many different emotions are there? Back in the 1970s, *American psychologist Carroll Izard identified ten distinct basic human emotions, present from infancy on. They are: joy,*

surprise, sadness, anger, disgust, contempt, shame, fear, guilt, and interest or excitement. Others have since suggested that pride should be added to that list, and still others believe that love should be classified as a basic emotion as well, but Izard has argued that these and other emotions are just familiar combinations of the classic ten.

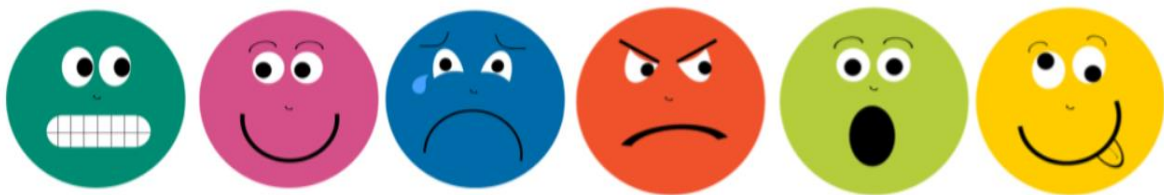
Today, some psychologists describe our emotional experiences using a two-dimensional model. The idea there is that any of the emotions you might feel while, like, reading Harry Potter or something, are expressed on a spectrum, and as a combination of valence - roughly speaking, good or bad - and arousal - excited or not excited, basically. So if you're feeling both really excited and super positive when Harry finally bested Voldemort, you could say you were "elated". On the other hand, if you're at that part in *Deathly Hallows* when Harry, Ron, and Hermione are just sorta wandering around on the land in a heavy mood, maybe your emotions fell more on the opposite side of the spectrum - in this instance, feeling depressed might be a combination of negative emotion and lack of excitement.

Eventually, every emotion can fall in degrees on this two-dimensional scale - like being terrified means you're more frightened than if you're just scared - just as being enraged is a more extreme version of anger than simply being mad. *These polarities, positive versus negative, high arousal versus low arousal, affect our psychological states, and therefore, our bodies, as well, because you'll remember that what is psychological is ultimately biological.* And when it comes to the physical effects of our emotions, it pretty much goes the way you might expect: happiness is healthful while chronic anger or

depression makes us vulnerable to all kinds of problems with health and well-being.

The good news is that if we're angry or sad, we often overestimate the duration of our bad moods and underestimate our capacity to adapt and bounce back from traumas, even if things feel hopeless, depressing or stressful in the thick of it. And we've all experienced stress before - sometimes on a daily, or even hourly basis. *Much like anger or joy, stress can slowly build and simmer, or it can strike suddenly and with great intensity. And yeah, stress, certainly the chronic or extreme type, can be bad for your health,* but defining stress is trickier than you might think.

Psychologists would define stress as the process by which we perceive and respond to certain events, or stressors, that we view as challenging or threatening. In other words, stress isn't technically an emotion, it's more of a reaction to a disturbing or disruptive stimulus.



And our reactions stem in part from our appraisal of that stimulus. A person can either roll with or get worked up about a missed flight, an increased work load, or a strange thump in the house. *These external stressors typically fall into three main categories: catastrophes, or unpredictable large-scale events like war, natural disasters, or terrorist attacks, significant life changes, things like moving, having a child, losing or getting a*

new job, or the death of a loved one, and then just everyday inconveniences, like getting caught in traffic or running late or feuding with your roommates.

Any of these stressful events, big or small, even the good things, can fire up your sympathetic nervous system and trigger that old "fight or flight" response. *In this way, it's important to understand that stress is ultimately natural. You experience it for a reason, and a bit of short-lived stress can actually be a good thing.* It can make you active and alert when you need to be, like an upcoming chemistry test might be stressing you out, but that might help you find focus so you can dominate that thing. And in your body moderate stress can kick the immune system into action to do things like heal wounds and fight infections. It does this by triggering the release of stress hormones like adrenaline and cortisol. These chemical messengers are what get your organ systems to respond the way you need them to when you're getting charged by a bear, or focusing really hard on the gas law for your chemistry test.

But they're also why chronic stress can really wreck a body and mind. Research has shown that abused children have a high risk of chronic disease, and people suffering from post-traumatic stress disorder, PTSD, which we'll talk about in an upcoming episode, experience higher rates of digestive, respiratory, circulatory, and infectious diseases.

A lot of these negative connections between your body's systems have to do with the fact that many of its most basic functions, like blood pressure, breathing, body temperature, digestion, and heartbeat, are in part regulated by the autonomic nervous

system. We've talked before about how the sympathetic side of that system cranks you up and the parasympathetic arm calms you down, but both of those systems also interact with the so-called "brain in the gut", the enteric nervous system, which helps regulate gastrointestinal functioning.

And it's this brain-gut connection that explains how stress causes digestive problems. Because when that werewolf pops out of the bushes and a wave of cortisol washes through you, your body wants to focus its energy on sending blood to your muscles so that you can react quickly. Which is good, right? But it may do that partly by shutting down digestion or decreasing the amount of digestive secretions and making your colon spasm. An anxious mind can lead to an anxious gut.



Stress is an even bigger risk factor in North America's leading cause of death, and heart disease, because it contributes to increased blood pressure, heart rate, and cholesterol levels in a number of different ways. Essentially, when your stressed-out nervous system is redirecting all of its energy sources to your muscles and brain, it pulls flow away from your other organs. And one of those organs is the liver, whose job includes

removing the fat and cholesterol from your blood. So basically, when a stressed liver can't filter properly, that extra fat and cholesterol ends up circulating in your blood, which can settle around the heart.

Don't believe me? One study monitored the blood cholesterol and clotting speed of forty male tax accountants throughout the year, and it found that their cholesterol and clotting rates, and thus risk of heart attacks, increased dramatically during the weeks before tax day, as they stressed out about finishing their work.

And physiologically speaking, it's worth pointing out that some close relatives to stress, when it comes to their effects on the body, are pessimism and depression, which also has been linked to stress and heart disease. *Many types of studies have found that people characterized by their optimism, happiness, love, and positive feelings often live significantly longer than their grumpy, dour counterparts.* Researchers don't quite know exactly how chronic negative emotional states influence health, but it may be some combination of lifestyle or behavioral factors, like neglecting your health or not taking your heart meds when you're feeling blue, or social factors, like the way that depression can be isolating and thus prevent others from helping you out, or biological factors, like increases in certain kinds of inflammatory proteins released by the immune system in response to stress and sadness.

So in the end, while stress may not directly cause disease, you could say that the two walk hand in hand. In that way, it isn't a stretch to say that chronic stress can kill, so go ahead, take a

deep breath, feel your emotions, appreciate them, don't let them run your life.

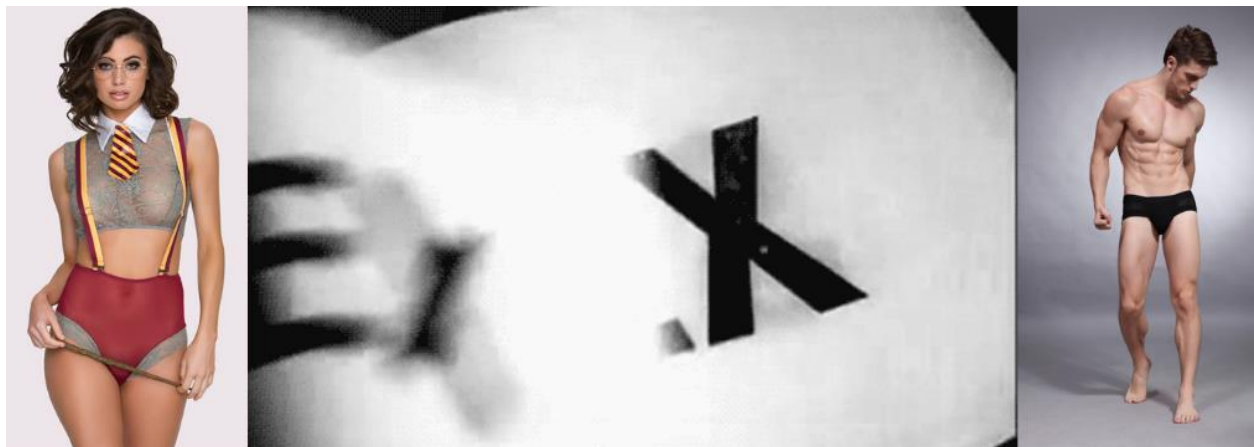
Today, we read about how our emotions work and how we use facial expressions to help us communicate. We also looked at the two-dimensional model of emotional experience and how anger, happiness, and depression can affect our health. We also discussed what stress does to your nervous system and how chronic stress can damage the functioning of your biological systems.

#27 - Sex

[Adapted from Crash Course Psychology with Hank Green, written by Kathleen Yale, edited by Blake de Pastino, with psychology consultant Dr. Ranjit Bhagwat]

People have been having sex and writing songs about it and carving statues of it and changing fashion for it since the dawn of humanity, but it wasn't until fairly recently in the 1940s that serious Western scientific study of sex began. And by most accounts you can thank one guy for that: *Alfred Kinsey*. Kinsey was studied etymology in college, graduated with degrees in biology and psychology before heading to Harvard. Kinsey's interests drifted toward human sexuality. He surveyed thousands of men and women about their sexual habits and histories, and found all sorts of interesting things related to sexual preferences, masturbation, orgasms, and pre-marital sex. *He established the "Kinsey scale" indicating degrees of sexual orientation, and went on to write the seminal texts on sexual behavior in the human male and female.*

SEX....



That one little word has complicated so many lives. The desire for or lack of sex has spawned poetry and made babies and

transmitted diseases and cost money and driven people batty and kept late-night cable in business. Even the word itself can mean many different things.

First we've got the verb kind of sex, the physical process of engaging in sexual acts and intercourse, which, probably I don't need to describe to you. Then we've got *the biological definition, having to do with the anatomical parts that go with the designations of male or female or intersex* (those who were born with the reproductive parts that don't fall into the predominant definitions of male or female).

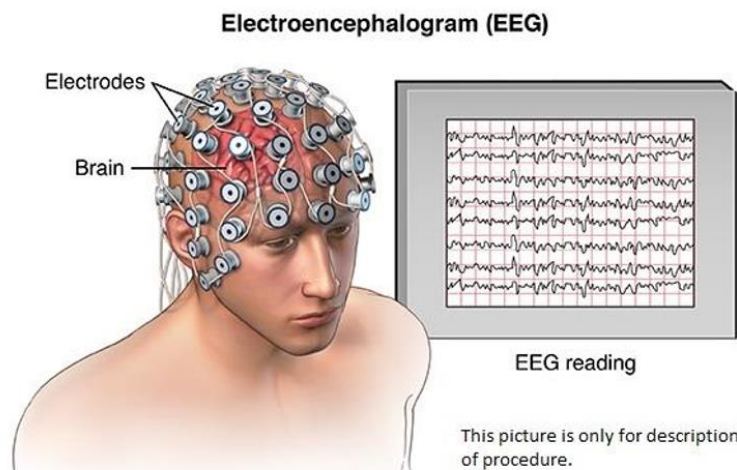


And these are quite separate from gender, or an individual's sense of identifying as male or female or another gender identity regardless of how that corresponds with their actual reproductive organs. For transgender people, for instance, gender identity typically doesn't match biological sex. *And gender identity is completely different from sexual orientation, which we'll talk about in a minute.*

So beyond definitions, we have the physiological and psychological aspects of sex. Let's start with the physiological, and with that, Masters and Johnson. *In the late 1950's and 60's, American gynecologists Williams Masters, and his collaborator*

and future wife, sexologist Virginia Johnson, did something no researchers had ever done before. They invited nearly 700 male and female volunteers, many of them sex workers, to come into their lab and have sex with one another (either alone or with their partners). Their aim? To record the body's physiological response to sex. This involved wearing a whole lot of wires and heart monitors and such, and is probably about as sexy as it sounds. All the volunteers had to be willing and able to show arousal and be capable of orgasm.

And over the years, Masters and Johnson recorded more than ten thousand "sexual cycles". The main thing they documented was that a complete sexual response cycle involved four distinct stages-- excitement, plateau, orgasm, and resolution-- which Masters and Johnson maintained happened in a linear way, one after the other.



In the excitement phase, things are gettin' goin', blood is rushing to all the necessary places, genital areas are becoming engorged and secreting lubricant. *Next comes the plateau phase. Pulse, blood pressure, and breathing rates keep increasing and genitals are becoming fully engorged.* The penis is often

secreting pre-ejaculate as vaginal secretions increase until the big event orgasm during which muscles all over the body contract and breathing and pulse rates hit their peak. Of course, a biological male orgasm typically releases sperm that may lead to fertilization, depending on the situation, but female arousal and orgasm also help facilitate conception, again depending on the situation as those muscle contractions and lubrication help draw up and retain sperm in the uterus. Finally, *the body comes back down to its normal state of affairs during the resolution phase. It's during this phase that males enter a refractory period during which they're unable to orgasm again for a few minutes to a day or more whereas biological females refractory period is very short in comparison.*

Well the four stage model of sexual response is still taught today, some have criticized both its rigid linear setup, arguing that things don't always work so tidily in the bedroom, and it's insistence in including orgasm which doesn't happen for everyone all the time. Others also question the model's clinical focus on only physiological factors arguing the cultural attitudes, psychological and relationship factors, and other external details should also be considered when looking at sexual response. I'll get back to that in a minute...

We are back, but before we move on to the psychology of sex, we've got to talk about hormones.

You remember hormones, those chemical messengers brewed up by the endocrine system that travel through the bloodstream and regulate all sorts of physiological and behavioral activities from

growth to digestion to sleep to sex. *Our sex hormones serve two major purposes. One, they direct the physical development of biological sex characteristics, and two, they help activate sexual behavior.* Estrogens like estradiol contribute to female sex characteristics and are secreted in greater amounts by females than males and while all humans make testosterone, it's the predominate sex hormone for males, stimulating the growth and development of male sex characteristics. Now most female mammals become sexually receptive when their estrogens peak during ovulation, but it doesn't really work that way for humans. Our hormones are more loosely related to sexual behavior, although studies have found that in general female's sexual desire spikes slightly around ovulation, when woman are most fertile and males can also be affected by this spike, responding with higher levels of testosterone when ovulating women are around.

But these short term changes hardly compare to the larger more major hormonal shifts that occur throughout a life time. Puberty, for one, tends to get everyone a lot more hot and bothered and interested in dating and gazing at posters of their favorite celebrity crushes and *later in life, as sex hormone production normally decreases, our amorous urges and endeavors tend to decrease as well.* Age affects our libido. But in the end you might think of sex hormones as fuel for your sexual engine, and while an engine can't run on a totally empty tank, it also won't run any better or worse on a full tank versus a half tank. We need our sex hormones, but we also need the right psychological stimuli to turn us on and keep us going sexually.

So, finally, let's look at some of these psychological aspects of

sex. First, there are the very important social and cultural influences. Things like your families, your societies, your religions, and your personal values. Does your community view sex merely as the means for reproduction or can it be fun, too? What are the views on premarital sex, and homosexuality, showing some skin or kissing in public?

Then there are the influences of external stimuli. *In western society, we're constantly bombarded with sexually charged content from movies and TV to advertisements, R&B slow jams, and Victoria Secret catalogs.* And constantly looking at images of things that you find extremely attractive can lead to folks viewing more average people, even their own partners, as being less attractive.

But our sexual desire is also fueled by internal stimuli. Our imagination and memories and fantasies. According to plenty of studies, at least 95% of people fantasize about sex at some point. The thing you need to keep in mind is that none of these factors work independently of each other. How we respond to both external and internal stimuli can be really heavily influenced by social and cultural factors, and that is where a lot of the thinking and studying of sex has gotten really complicated.

Human judgment and morality is often entangled with sex and desire and sadly, a lot of people have been made to feel miserable for liking certain things or being attracted to certain people. There's also just been a lot of misinformation out there. For ages, a lot of folks believed that masturbation could make you go blind, become mentally ill, or kill the neighborhood kittens. It doesn't do that.

And as I know, you're thinking right now one area of sexuality has been needlessly associated with conflict, fear, and shame. In many cultures it is sexual orientation. For our purposes, sexual orientation can be defined as a relatively enduring physical or romantic attraction to another person. *Heterosexual, homosexual, and bisexual are all types of sexual orientation. And although the field once stigmatized non-heterosexual orientation, we now know that homosexuality and bisexuality are in no way related to mental health.* Psychologists are also beginning to look more in depth at other sexual orientations. For instance, Asexuality or nonsexuality, where no sexual attraction of any kind is experienced. In any case, whether a culture itself is friendly to or tyrannical against any of these orientations, sexual orientation is neither chosen nor changed.

So, what might cause these differences? Hopefully you already know this but it's worth repeating. There's no evidence that sexual orientation is determined by things like dominating mother or passive father or sex hormone levels in your adult body or your history of childhood abuse or whether your parents were gay or straight. In other words, *decades of research have led most researchers to believe that once you're born, there are no clear environmental factors that influence your sexual orientation.* And there's been a lot of research into possible biological components of sexual orientation, like genetics, brain anatomy, prenatal conditions, or other things. It's also important to know that we're far from understanding sexual orientation on a purely biological level. If anything, *the evidence we've got simply strengthens the idea that sexual orientation isn't choice, but rather a naturally varying occurrence among human beings,*

like height.



After all this talk about sex, perhaps you're wondering why we do it at all. I mean, it feels good obviously. But the biggest function of sex goes beyond pure pleasure. In fact, sexual intimacy serves many of life's most basic purposes: some times procreation, but also stress reduction, maintaining healthy relationships, social bonding, and the expression of love, and overall fulfillment. *People say the brain is the most significant sex organ for a reason. And intimacy is often its own reward.*

Today, you learned about Alfred Kinsey's ground breaking sex surveys, the differences between how we define biological sex and gender identity, and about Masters and Johnson's four-part sexual response cycle. We also looked at the role of sex hormones, in our development and drive, how psychological and social factors play into sex. How we think about sexual orientation and why we have sex in the first place.