OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

Zoom Virtual Classroom (Wed. @ 1:45-3:15 pm ET: Mar 20 thru May 1)
Lecturers: Carl Weichel & Kim Weichel

Course Abstract:
How do our emotions influence our behavior and life choices? How does our "hidden brain" make important decisions in our lives without our awareness? In this course we'll explore topics ranging from roles of social conformity to snapshots of our prejudices. Data-driven research has shown that most human decisions are triggered unconsciously through over 135 emotions, from falling in love to following a career path to nations going to war. The book and NPR radio series "The Hidden Brain" by Shankar Vedantam draw intriguing arcs from social psychology to our embedded cultural norms. And while social cues influence interactions, they also can create hazards. We'll listen to podcasts, review research, and have interactive discussions.

Lecturers:
Carl Weichel has held various positions over his career in marketing, design, and advertising in Australia, South Africa, Canada, and San Francisco. Carl has led OLLI study groups on Political Polarization, The 1960s Decade, Our Hidden Brain, Exploring Eastern Thought, The NY Times Book Review, David Brooks' Writings, and Exploring Our Cultural Complexities

Kim Weichel is a social entrepreneur and nonprofit leader in the fields of women's leadership, cross-cultural dialogue, citizen diplomacy, and peacebuilding, and is a published author and public speaker. In addition to Our Hidden Brain, she has co-led OLLI courses on The U.N., The 1960s Decade, and Exploring Our Cultural Complexities.

Since 2015, the Weichel's have lectured and lead study groups at OLLI-American Univ. (D.C.), OLLI-Yavapai College (AZ), OLLI-Dominican Univ. (CA), LLP-College of Marin (CA), LLP- Univ. of Cape Town (RSA), and LLP-San Miguel (MEX). They reside in Tiburon, Ca.

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HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**
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CLASS 1 - OUTLINE (Mar 20)

Overview: Review 4-part course

Part ONE: Emotions & Behaviors

Video 1: "Experts in Emotion" (1:10) - June Gruber Introduces Yale's Experts in Emotions Series

Video 2: "The Science of Emotions" (+9:00) - Jaak Panksepp at TEDxRainier

Video 3: "Facial Expressions Reveal 6 Basic Emotions; Your Senses Help to Create Them" (10:12)

Summary:

Reading 1: "Robert Plutchik's Theory Chart of Eight Basic Emotions"

Reading 2: "Clinical Therapists List of our 160 Emotions"

Reading 3: "Hard Feelings: Science's Struggle to Define Emotions" by Julie Beck

Reading 4: "Healing Power of Feeling" by Andy Kim

Class Discussion:

Part TWO: 'HIDDEN BRAIN' Podcasts

Topic A – THE BRAIN'S TWO MODES

HB Podcast 2: In "How The 'Hidden Brain' Does the Thinking For Us" (7:32) Science writer Shankar Vedantam explains in his 'The Hidden Brain' how our brains have 2 modes — conscious & unconscious; pilot & autopilot — and we switch between both. The problem arises when we switch without our awareness into autopilot, which can lead to making snap judgments. The mind is hard-wired to form associations between people and concepts at an early age, including racial categorization.

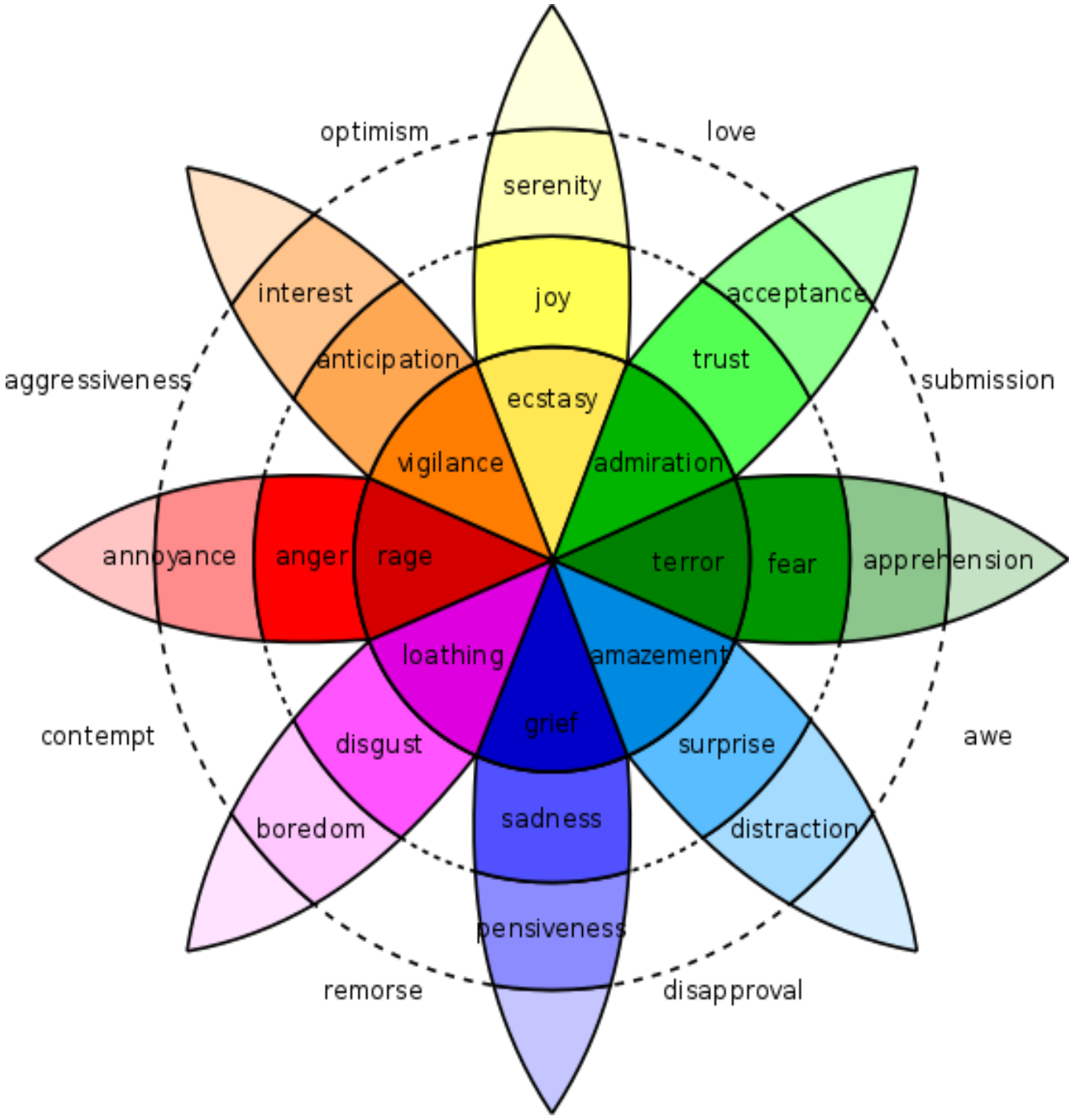
Topic B – NEW THEORY OF LEFT<->RIGHT BRAIN

HB Podcast 1: "One Head-2 Brains" (edited 16:48) For decades, pop psychology books and web videos have made dramatic claims about people who are left-brained and people who are right-brained. Psychiatrist Iain McGilchrist was intrigued by a question that has fascinated philosophers and scientists for centuries: Why is the human brain divided in half? (Original 51:22) https://www.npr.org/2019/02/01/690656459/one-head-two-brains-how-the-brains-hemispheres-shape-the-world-we-see

Class Discussion

Reading #1: *"Robert Plutchik's Theory Chart of Eight Basic Emotions"*

This hypothesis is that basic emotions can function as building blocks, with more complex emotions being blends of basic ones. For instance, *contempt* could amount to a blend of *anger* and *disgust*. However, many complex emotions cannot be deconstructed into more basic ones (Note: the theory does not adequately explain why infants and animals do not share in complex emotions.)



"Robert Plutchik's Theory Chart of 8-Basic Emotions"

1. **Fear → feeling of being afraid, frightened, scared.**
2. **Anger → feeling angry. A stronger word for anger is *rage***
3. **Sadness → feeling sad. Other words: *sorrow*, *grief* (stronger feeling, e.g. someone has died)**
4. **Joy → feeling happy. Other words are *happiness*, *gladness***
5. **Disgust → feeling something is wrong or nasty.**
6. **Surprise → being unprepared for something.**
7. **Trust → a positive emotion; admiration is stronger; acceptance is weaker.**
8. **Anticipation → in the sense of looking forward positively to something which is going to happen. Expectation is more neutral.**

FEAR is a feeling or an emotion. A person who fears something does not want it to happen. The fear response comes from sensing danger. It leads to the fight-or-flight response. In extreme cases of fear (horror and terror) there may be a freeze response or paralysis. In humans and animals, fear is adjusted by cognition and learning. Thus, fear is rational or, or it is irrational or inappropriate is called a phobia. Fear is the body's way of protecting itself from doing things that may be dangerous. For example, if one has a fear of jumping off a cliff, he/she will not do it. This saves one from death. In this case, fear is a good thing but in others, it can be bad (e.g. If fear stops one going to see a doctor.) There is only a small set of basic or innate emotions and fear is one of them. It has been preserved throughout evolution.

ANGER is one of the basic emotions. It is an inherited response, and is common to all mammals and a number of other animals. It happens when we are threatened, offended, wronged, or denied something we really want or need. Rage is the strongest form of anger.

SADNESS is an emotion. It is the opposite of happiness. People feel **sad** when something bad has happened, for example, if their mother or father has died, or if they are parted from friends. The word "miserable" has a similar meaning. In big letters, **SAD**, or **S.A.D.** is short for "Seasonal Affective Disorder". SAD is a sickness that some people have in the winter. They feel depressed as the nights become longer and there is less daylight. When people are very sad a long time, a person could have a serious mental illness (depression or Bipolar disorder).

JOY (HAPPINESS) is a feeling of pleasure and positivity. When someone feels good, proud, relieved or satisfied about something, that person is said to be "happy". Feeling happy may help people to relax and to smile. Happiness is usually thought of as the opposite of sadness. However, it is possible to feel both at once, often about different things, or sometimes even about the same thing. Many philosophers have said that people in the world go back and forth between times of happiness and sadness, but there is nobody who is always happy or always sad. Happiness sometimes causes people to cry when they laugh because the emotion takes control of them. Happiness was thought of as the key to love in ancient civilizations such as the Incas and the Mayans.

DISGUST is an emotion. People feel it when they see, touch, hear, or taste something that they think is nasty or repulsive. It is also caused by scorn. For example, when one finds something dirty or not fit to eat. Levels of disgust vary based on cultural, religious, and personal backgrounds/experiences. Disgust can be deliberate as someone can do something on purpose to create this emotion.

SURPRISE is an emotion that a person might feel if something unexpected happens. For example, a person may feel surprised at a loud, sudden noise, like the popping of a balloon, or they may feel surprised at the outcome of an event. The feeling of surprise can be both good or bad, depending on the circumstances.

TRUST is a feeling that somebody or something can be relied upon, or will turn out to be good. It is the feeling of being sure about something, even if it cannot be proved. The word "trust" can be a noun or a verb: (Noun): I have complete trust in you (meaning: I can rely on you to do the right thing, or what I want you to do).(Verb): I trust you completely (same meaning).There is also an adjective: **trusting**. He is very trusting (meaning: he trusts people easily).

ANTICIPATION, or being enthusiastic, is an emotion involving pleasure, excitement, and sometimes anxiety in considering some expected or longed-for good event. Robin Skynner considered anticipation as one of "the mature ways of dealing with real stress... You reduce the stress of some difficult challenge by anticipating what it will be like and preparing for how you are going to deal with it.

Reading #2: *"Clinical Therapist's List of 160 Emotions"*

Feelings and emotions are complex and can sometimes be uncomfortable and overwhelming This worksheet provides a list 160 emotion words that clinical therapist's use with clients to help to express how he or she feels.

Positive Emotions	*Anxious Emotions*	*Negative Emotions*
Excited	Afraid	Angry
Elated	Fearful	Sad
Euphoric	Anxious	Depressed
Happy	Apprehensive	Disgusted
Peaceful	Hesitant	Ashamed
Secure	Resistant	Discouraged
Encouraged	Concerned	Pessimistic
Optimistic	Worried	Doubtful
Helpful	Annoyed	Hopeless
Hopeful	Surprised	Helpless
Lovable	Insecure	Unlovable
Confident	Overwhelmed	Envious
Joyful	Eager	Embarrassed
Motivated	Uncomfortable	Despondent
Silly	Suspicious	Resentful
Light-hearted	Tense	Bitter
Outgoing	Unsafe	Stupid
Easygoing	Bored	Worthless
Relieved	Confused	Distain
Content	Inadequate	Disregarded
Determined	Trapped	Furious
Satisfied	Irritated	Foolish
Inspired	Aggravated	Grief
Loving	Lost	Hurt
Amazed	Trapped	Violated
Dazzled	Cornered	Miserable
Comfortable	Frustrated	Lonely
Energetic	Nervous	Disappointed
Proud	Self-conscious	Let down
Valued	Shocked	Forgotten

Reading #3*:* *"Hard Feelings: Science's Struggle to Define Emotions"*

While it's possible for researchers to study facial expressions, brain patterns, behavior, and more, each of these is only part of a more elusive whole in behavior.

THE ATLANTIC (Feb. 24, 2015)
By Julie Beck

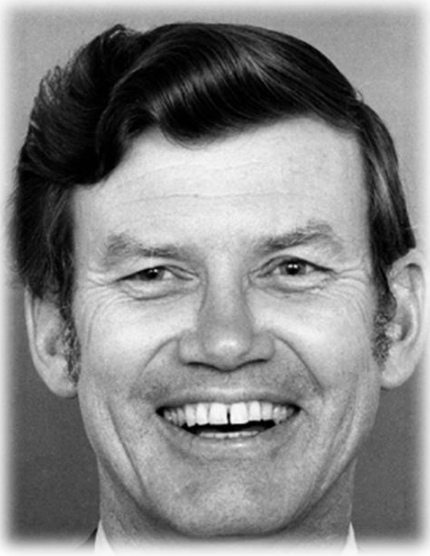
Paul Ekman was a grad student in the 1950s, psychologists were mostly ignoring emotions. Most psychology research at the time was focused on behaviorism—classical conditioning and the like. Silvan Tomkins was the one other person Ekman knew of who was studying emotions, and he'd done a little work on facial expressions that Ekman saw as extremely promising. "To me it was obvious," Ekman says. "There's gold in those hills; I have to find a way to mine it."

For his first cross-cultural studies in the 1960s, he traveled around the U.S., Chile, Argentina, and Brazil. In each location, he showed people photos of different facial expressions and asked them to match the images with six different emotions: happiness, sadness, anger, surprise, fear, and disgust. "There was very high agreement," Ekman says. People tended to match smiling faces with "happiness," furrow-browed, tight-lipped faces with "anger," and so on.

But these responses could have been influenced by culture. The best way to test whether emotions were truly universal, he thought, would be to repeat his experiment in a totally remote society that hadn't been exposed to Western media. So he planned a trip to Papua New Guinea, his confidence bolstered by films he'd seen of the island's isolated cultures: "I never saw an expression I wasn't familiar with in our culture," he says.

Once there, he showed locals the same photos he'd shown his other research subjects. He gave them a choice between three photos and asked them to pick images that matched various stories (such as "this man's child has just died"). Adult participants chose the expected emotion between 28 and 100 percent of the time, depending which photos they were choosing among. (The 28 percent was a bit of an outlier: That was when people had to choose between fear, surprise, and sadness. The next lowest rate was 48 percent.)

And so the six emotions used in Ekman's studies came to be known as the "basic emotions" all humans recognize and experience. Some researchers now say there are fewer than six basic emotions, and some say there are more (Ekman himself has now scaled up to 21), but the idea remains the same: Emotions are biologically innate, universal to all humans, and displayed through facial expressions. Ekman, now a professor emeritus of psychology at the University of California, San Francisco, with his own company Ccalled The Paul Ekman Group, was named one of *Time*'s 100 mostinfluential people in 2009, thanks to this work.



The "Happy" face from Paul Ekman's research

But despite the theory's prominence, there are scientists who disagree, and the debate over the nature of emotion has been reinvigorated in recent years. While it would be easy to paint the argument as two-sided—pro-universality versus anti-universality, or Ekman's cronies versus his critics—I found that everyone I spoke to for this article thinks about emotion a little differently.

Across cultures, people tended to match smiling faces with "happiness," furrow-browed, tight-lipped faces with "anger," and so on.

"It's been said that there are as many theories of emotions as there are emotion theorists," says Joseph LeDoux, a professor of neuroscience and the director of the Emotional Brain Institute and the Nathan Kline Institute for Psychiatric Research at New York University.

The issue at the heart of this debating and theorizing is that it's extremely difficult to pin down what people are debating and theorizing *about.* Because there is no clear definition of what an emotion is.

The word "emotion" did not exist in the English language until the early 17th century. It made the hop from France to Britain when British linguist John Florio translated philosopher Michel de Montaigne's essays; Florioreportedly apologized for including the word, along with other "uncouth terms" from the French language. Uncouth, perhaps, because, as Thomas Dixon explains in his history of the word, it referredthen to agitations, bodily movements, or commotions—there could be "public emotion," for example.

For many centuries, the sorts of mental states to which "emotions" now refer were typically called either passions or affections. The ancient Greek and Roman Stoics were notoriously anti-passion; they taught that man should use reason to battle all feelings, in order to avoid suffering. The Christian theologians Thomas Aquinas and Augustine of Hippo thought that was a bit much, so they carved out a separate category of good, virtuous feelings, which they called affections—things like familial love and compassion for others—and distinguished them from "evil" passions such as lust and rage.

Around the mid-18th century or so, Dixon writes, these passions and affections were lumped together under the umbrella of emotion. In the early 19th century, Scottish philosopher Thomas Brown was the first to propose emotion as a theoretical category, opening the door for scientific research. But though he was eager to study it, Brown couldn't define it.

"Surprise," an emotion Elkman's subjects often confused with "Fear" or "Sadness"

"The exact meaning of the term *emotion,* it is difficult to state in any form of words," Brown said in a lecture. And so it has remained.

"The only thing certain in the emotion field is that no one agrees on how to define emotion," Alan Fridlund, an associate professor of psychological and brain sciences at the University of California, Santa Barbara, wrote to me in an email. Many modern articles on the topic start off by referencing "What Is An Emotion?," an 1884 article by the influential psychologist William James, and go on to bemoan that science has still not answered that question. If a researcher does propose a working definition in a study, it's unlikely that anyone but the author will use it or agree with it. The author might be categorizing emotions based on behaviors, physiological responses, feelings, thoughts, or any combination thereof.

In everyday life, the lack of a formalized definition of emotion (or any of the more specific terms that stem from it—happiness, anger I asked a few of my coworkers to try and got responses like "individual-specific reactions to experiences," "sensitivityto events," "your mind's reaction to experience," and, poetically, "the description of intangible human feelings, the powerful internal sensations that color our every experience." Yes, emotions are intangible.

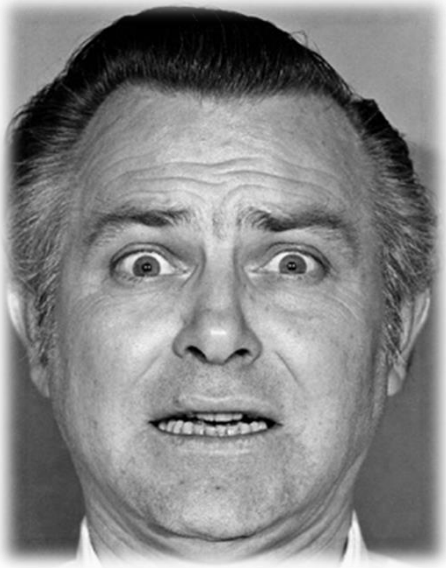
"Psychology is really experimental philosophy," says Lisa Feldman Barrett, a university distinguished professor of psychology at Northeastern University, and the author of the book *How Emotions Are Made*. Biology, for example, is a discipline that relies solely on observations of the natural world, while psychology researchers "take common sense categories that people use in everyday life and try to treatthem like scientific categories."

Barrett has emerged in recent years as a new voice in the field of emotion, with a unique perspective on how to think about the phenomenon. In her 2006 article "Are Emotions Natural Kinds?", she threw downthe gauntlet, positioning herself strongly against Ekman's viewpoint that emotions are biologically basic.(The term "natural kind" refers to a group of items that are inherently equivalent.) "The natural-kind view has outlived its scientific value," Barrett wrote, "and now presents a major obstacle to understanding what emotions are and how they work."

According to Ekman, the evidence for universality is "extremely strong and robust, statistically." In a meta-analysis of similar photo-matching experiments, people across cultures were able to correctly categorize emotion expressions an average of 58 percent of the time—higher for some emotions, lower for others. That is significantly greater than chance. The question is, is it enough?

As Barrett sees it, words like "joy" and "rage" describe a whole host of complex processes in the brain and the body that aren't necessarily related.

Barrett says no. She doesn't think expression categorization shows that emotions are biologically basic, and she's not convinced these specific expressions appear every timesomeone feels the corresponding emotion. She points out, for instance, the subtlety and range of actors' emotional expressions. "When was the last time you saw an actor win an Academy Award forscowling?" she asks.



"Fear"

She acknowledges, in her 2006 article, that "meta-analytic and narrative reviews clearly indicate that perceivers from different cultures agree better than chance on the best label to assign to posed, static, facial configurations … But above-chance accuracy is only part of the picture."

The rest of the picture is interpretation. Either 58 percent is good enough for you, or it isn't. If something truly universal and innate is going on, why can't we do better than just "above-chance"?

Human error, some might say. Just because an emotion is expressed on a face doesn't mean the person looking at the face can read it accurately. Or maybe the same expression can be read different ways by different people. Barrett suggests that priming people with stories like "this man's child has died" might lead them to categorize a pouting face as sadness, when they might label it something else withoutthe context.

As Barrett sees it, emotions are totally made up. Not that they aren't meaningful—it's just that words like "joy," "shame," and "rage" describe a whole host of complexprocesses in the brain and the body that aren't necessarily related. We've just lumped some of these things together andnamed them. She compares the concept of emotion to the concept of money. The only thing that holds that category together is that humans agree," she says. "Currency exists because we all agree something can be traded for material goods.Because we agree, it has value. One of the remarkable things humans can do that no other animal can do is that we can make stuff up and make it real. We can create reality."

"Anger"

One common critique of the labeling-photos approach is that the expressions in the pictures are posed. A study done in the 1980s found that when people were shown photographs of candid, spontaneous emotions, the rate of recognition went down from than 80 percent with posed pictures to just 26 percent. It is true, that in daily life, you probably won't see an Edvard Munch *The Screamface* every time someone feels afraid.

The extreme, exaggerated version of an emotional facial expression might only appear in extreme situations— when a loved one has died, or when someone is inmortal danger. For subtler emotions, Ekman's theory goes, the corresponding expressions are subtler, as well.

And people can also actively suppress their more dramatic facial expressions if they don't want people toknow what they're feeling. What Ekman calls micro-expressions are the small, quick facial movements that sometimes leak out anyway, even when someone's trying to keep a lid on it.

To support his theory of micro-expressions, Ekman has done research measuring the movement of facial muscles while eliciting emotions. The smaller movementsare harder to see, which may explain why the candid expressions in that study from the 1980s were harder for subjects to recognize—subtle emotions are often the most researchers can evoke in a laboratory.

"These [tools] have been used by a variety of organizations—all of the three-letter intelligence and law enforcement agencies on a national level," Ekman says. "My research has not been limited to the labeling of still photos." He complains that takedowns of his work ignore this component altogether. "My critics pretend [the measurement research] wasn't published, but it was published, and it was a lot of work."

This research is in fact the basis for the TV crime drama *Lie to Me*, which features a researcher who helps law enforcement by detecting deception through facial expressions and body language. "I reviewed every script," Ekman says, "and gave them feedback, which sometimes they took and sometimes they didn't."

But for the most part, it's Ekman's fundamental idea—that emotions are the same for all humans across cultures—that tends to provoke the most criticism. Decades before either Barrett or Russell criticized his model, he was catching flak from the famous anthropologist Margaret Mead, who believed emotions were a product of culture. "[Mead] treated me rather shoddily," Ekman says. In a 1975 issue of *The Journal of Communication*, Mead wrote a disparaging review of Ekman's book *Darwin and Facial Expression*, calling it "an example of the appalling state of the human sciences."

"I never found out whether she was making a pun on my first name," Ekman says, referring to the "Paul" in "appalling."

But emotions don't exist in a vacuum, and for some researchers, context is everything. (Though, for what it's worth, Ekman does concede that the basic toolkit of emotions all humans share can be influenced by experience.) "When people across cultures have the words for anger, that doesn't mean that anger means the same thing, that it evolves in the same way, that the same situations are thought to be anger, that how anger functions in a relationship is similar," says Batja Gomes de Mesquita, director of the Center for Social and Cultural Psychology at the University of Leuven in Belgium.

When Mesquita considers Ekman's photos, she says, "it's not clear to me that what these faces express is emotion. But it's undeniably the case that what they express is relevant to emotions. I think a lot of the problems are not so much in the data, but in the inferences from those data."

If not facial expressions, then what's the best way to measure emotions? A 2007 paper on which Barrett and Mesquita were co-authors called for "a focus on the heterogeneity of emotional life." The authors asserted that "language use, context, culture, or individual differences in prior experience will produce variation in whether emotions are experienced, which emotions are experienced, and how they are experienced." There are a number of methodologies researchers can use to capture this heterogeneity, from brain imaging to measuring physiological responses, but learning what someone actually feels, Barrett says, is hard to do with anything other than self report—asking people to describe how they're feeling or answer questionnaires.

"The gold standard is self-report," says Maria Gendron, a postdoctoral research fellow in Barrett's lab at Northeastern. "Because it doesn't make assumptions." Of course, this methodology is up for debate as well. "The memory for emotional experience is highly unreliable," Ekman says. "If [self-report] is the method that's used, I won't read the article."

One problem, as many scientists pointed out to me, is that language—particularly the language of emotion—is inconsistent. "If someone says, 'I'm really anxious to see you,' what they're really saying is, 'I'm eager to see you,'" Ekman says. "If they're anxious about seeing you, that means they're highly disturbed mentally at the prospect of seeing you. The layman uses these words very sloppily."

On the biology side, some researchers are trying to identify structuresand systems in the brain where emotions come from. One scientist, Jaak Panksepp, a professor of neuroscience at Washington State University, has identified seven circuits of neuronsthat he says correspond with seven basic emotions.

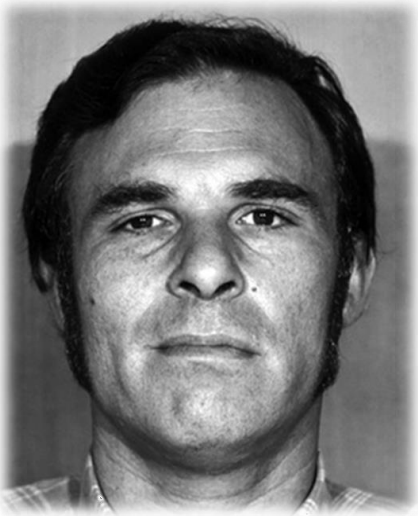
"Sadness"

Panksepp's workis congruous with Ekman's on the universality issue, but he actually takes it even further—he works with animals and says there's something about emotions that's biologically basic not just to humans but to all mammals.

LeDoux, the NYU neuroscientist, is somewhere in the middle. He thinks responses to stimuli are hardwired into the brain, which lines up with Ekman and Panksepp. But like Barrett, he thinks that the conscious brain and the analysis that goes on there are necessary for the experience of emotion. By this logic, since we can't know what animals are experiencing, there's no way to know if animals have emotions. He emphasizes the role human consciousness plays in studying things like emotion. (What consciousnessis, and how it works, is a whole other contentious question.) "In physics, it doesn't matter whether people believe the sun rises or not," he says. "That has no impact on the movements of the planets and star

Whereas in psychology, people's ideas about how the mind works influence the subject matter. Our folkpsychology, in other words, can't be divorced from the science."

Consider the amygdalae, the two little oblong nuggets, one on each side of the brain, that are widely considered to be the seat of fear. A recent episode of the NPR show *Invisibilia* featured a woman who suffers from a rare disorder that left her amygdalae calcified. The patient, who goes by the initials S.M., does not report experiencing fear, a fact that would seem to solidify the connection between anatomy and emotions. But in 2013, researchers were able to trigger a fear response in S.M. and other patients with amygdala damage by having them inhale carbon dioxide. This makes the body feel like it's suffocating, and the so-called "fearless" patients panicked, much as anyone would.



Ekman himself model's "Contempt"

"Everybody had a headline about this — 'Fearless Woman Feels Fear,'" LeDoux says. "The only reasonyou'd be surprised by that is if you think fear comes from the amygdala." In 2013, researchers were able to trigger a fear response in patients with amygdala damage by havingthem inhale carbon dioxide.

LeDoux defines fear as what happens in the conscious brain in reaction to the response to danger fromthe brain's survival circuit. If that's the case, then a person's experience of fear comes not from the amygdala itself, but from the brain structures responsible for cognition.

"Feeling afraid only occurs in organisms that can be conscious that they are in danger," he wrote in a paper published in January. When I spoke to him, he added, "If we tell people the amygdala is directly responsible for fear, we're giving the wrong message." For his part, even Ekman would no longer say that facial expressions alone equal emotion. "Thirty years ago, I was emphasizing facial expression, and I might have said to you: 'Expressions are emotion,'" hesays. "[But] it's not a single phenomenon. It's a group of organized phenomena. Some theorists have emphasized one." Ekman now considers physiology, appraisal, subjective experience, and antecedent events (you have an emotion *about* something) to be distinctive characteristics of emotion, along with facial expression and

a few other factors. Still, "at the heart of 'emotion' is the experience of emotion, and this can't be measured," Fridlund writes. Recorded, maybe, but not measured. "This leaves scientists studying 'emotion' trying instead to measure everything around it."

Even if there's no consensus on what emotions *are,* there's at least some overlap in what scientists think they involve. In 2010, Carroll Izard, who, along with Ekman, contributed greatly to the universal basic emotions theory, surveyed 34 emotion researchers on their definitions of emotion. While "no succinct synthesis could capture everything in the 34 definitions of 'emotion' given by the participating scientists," he writes, here is the description Izard came up with, based on the things that had the highest agreement: Emotion consists of neural circuits (that are at least partially dedicated), response systems, and a feeling state/process that motivates and organizes cognition and action. Emotion also provides information to the person experiencing it and may include antecedent cognitive appraisals andongoing cognition including an interpretation of its feeling state, expressions or social communicative signals, and may motivate, approach or avoidant behavior, exercise control/regulation of responses, andbe social or relational in nature.

Izard then goes on to say that "the foregoing noteworthy and highly pluralistic description of the structures and functions of emotion is not a definition." The scientists agreed more on what emotion *does* than what it is. (It seems from my research that there's some disagreement, too, on what an emotion *isn't.* States like "hungry" or "sleepy" are usually excluded, but while one researcher might call "love" an emotion, for example, another might say it isn't a brief enough feeling to qualify.)

Panksepp says he feels he's often dragged into debates even though he sees his work on the "primary level" of the brain as a foundation for researchers like LeDoux and Barrett, who emphasize cognition, to build on. "I see myself as providing great assistance to other [scientists] if they desire such assistance," he says, adding, "People are always competing. That's the way it's always been and will always be."

Dacher Keltner, the Berkeley psychologist, says, "I think we're always going to battle over what the broad construct of emotion is. There's something about emotion that produces these disputes. It may be that we think we're getting down to the essence of human nature."

When there isn't an agreed-upon definition for what researchers are seeking, science can look like a kind of religion. People commit to different paths to look for the same thing. Some become certain that their path is the right one. Others are agnostic—certain only that things are uncertain. Still others are content to ignore the unanswerable questions and focus on analyzing things that don't resist analysis. Data is data, true enough, but individuals can interpret it however they please.

Fridlund sees the emotion field as a kind of Rorschach blot "on which psychology is pretext, but ideology is subtext." He describes the Mead/Ekman feud, for example, as primarily one of ideology. He thinks Ekman's universality theory was an attempt to bring psychology back from Mead's idea of cultural diversity to a "feel-good Kumbaya message" where "we're deep-down all the same."

Science is not always a set of answers to questions, a collection of hard-won facts about how the world works. Sometimes the scientific method spans decades, centuries even, every study a drop in a bucket that might never be filled. It's hard to know how close emotion researchers are to a solution, or if there even is one. "Philosophically, it's arguable that 'experience' is not anything intrinsically measurable," Fridlund writes. "This may make it forever off-limits to science."

It would be kind of nice to think that in this age of answers, there might be a forever question. Not about God or the meaning of life, but just about humans and how we work. Maybe emotions are just the collection of physiology, behavior, and situational context, nothing more. But maybe there's something more to them than just that—a deeper meaning that emerges from the constellations we create, something transformative and, ultimately, unknowable.

Reading #4: The Healing Power of Feeling – A Buddhist's Perspective

By Andy Karr - June 27, 2023

"The way to find freedom from difficult emotions is to find it right within the feelings themselves," writes Andy Karr in his new book, *Into the Mirror.* Here, he shares a practice for locating and working with difficult feelings in the subtle body to ultimately heal them.

In the modern world we often treat feelings like distant relations whom we only acknowledge when we see their posts on Facebook or Twitter. Some feelings seem like annoying younger siblings, who won't leave us alone while we play a game or watch a movie. We are heady people. There is so much emphasis on thinking in our upbringing that we are often numb from the neck down.

Acknowledging feelings is the first step in working with them. It's ironic that many of us can know our feelings intellectually but unable to feel them directly. How did we get here? This could go back to our childhood. Maybe our parents' love was conditional on our behavior and our achievements. They showered us with affection when we did well, withheld warmth or punished us when we didn't do well or misbehaved, or just ignored us altogether. Maybe we were rejected and bullied by the cool kids or frequently embarrassed in front of our peers. We might have been traumatized by life-threatening illness, or damaging relationships, or loneliness. Some of us experience prolonged stress that comes from pushing ourselves to please others. Some of us have unrelenting work and career pressures that put us continually on the defensive.

There is little in our culture that encourages us to relate to these painful feelings simply and directly—quite the contrary. We are taught countless methods for analyzing, rationalizing, and avoiding our feelings. Our lives are all about doing, accomplishing, making progress. However we might feel, we are taught: Just get on with it. Relating directly to feelings seems too intense, too sharp, too penetrating.

At the first glimmers of fear, agitation, or embarrassment, we learn to smother the feelings with discursiveness, anesthetize them with intoxicants, suppress them with ignorance, or turn to our various screens for distraction. Instead of feeling the feelings, we end up experiencing attenuated, conceptualized versions of feelings. The obstructed and congested feelings become fixed into distorted psychosomatic patterns that disturb our bodies and our minds. These become long-festering wounds that manifest as physical disorders and mental neuroses. These patterns color our outlook on life, our images of ourselves, and our relationships with the people around us. If the distortions and blockages are great enough, they can lead to breakdowns and even psychosis.

The intellect is incapable of healing these wounds. This is not something you can solve by figuring it out. You won't be able to loosen the knots or remove the blockages with the thinking mind because the thinking mind is part of the problem. It is only by entering directly into the world of feelings that healing can begin.

The Subtle Body

Feelings manifest in definite locations and travel along regular pathways in our bodies. These locations and pathways are sometimes called the subtle body, but they are not anatomical features or physical structures. You won't find them by examining the body under a microscope. Although meditators sometimes visualize the subtle body in various shapes and colors, the subtle body is not a collection of esoteric symbols hidden beneath the skin.

The subtle body is the locus of emotional experience. This is where you meet feelings face-to-face. But you won't be able to know the subtle body in an analytical way—"Is it real?" "Does it exist?" "What is it made of

?" All these questions are part of the intellect's way of knowing. They prevent you from directly encountering feelings and the subtle body. The only way to feel the feelings is to drop thinking and let awareness rest gently on the textures of feelings themselves.

When you do this, the first thing you will probably experience is fear. This might deflect you and set off a chain reaction of emotionality and discursiveness. That's normal. You don't need to be afraid of the fear. Although it seems like experiencing fear will cause you harm, fear will not damage you. If it pushes you away, try to gently drop back into contact with the feelings of fear. Try to observe where the feelings are located. Examine the texture of fear and its dimensions. If the fear freaks you out, don't be discouraged. Be gentle. Give yourself time. You can learn to work with fear.

You will encounter all sorts of feelings. Feel them. Don't try to know them or understand them with thinking mind. The feelings might open up, but if you approach them with an agenda of making them change or transform, they will solidify and become harder and more persistent. The way to find freedom from difficult emotions is to find it right within the feelings themselves. Healing begins when you change your attitude toward difficult feelings and welcome them to stay as long as they like.

How to Practice

You can work with your subtle body, both within meditation sessions and in daily life. When you are meditating and notice feelings of discomfort, you can hit pause on the meditation technique and work with the feelings directly.

Begin the subtle body practice by dropping thinking and letting awareness rest directly on the feelings. Gently stay with the feelings if they push back. Rest with the feelings. If you find yourself distracted and lost in narration, judging or thinking about why you have these feelings, let go of the discursive activity and return to experiencing just the texture of the feelings.

Don't force anything. Recognize when you want to make the feelings go away or transform them into something more pleasant. Feel that, and then settle back into whatever you're feeling. If the feelings open up and relax, so be it. If they don't open up and relax, so be it. Just be with whatever is happening in the subtle body. When the feelings diminish or shift, go back to the meditation technique. If they don't diminish or shift, that is also all right. If you struggle with feelings, they only become more solid and painful.

When you are not meditating and difficult feelings arise, you might be tempted to ignore them and push through with whatever you are doing. Don't do it! It is far better to take at least a few moments to do this subtle body practice. If you are about to have a difficult conversation with someone, for example, it's natural to have uncomfortable feelings. If you try to suppress the feelings and get on with the conversation, the feelings will distort your perceptions and your communications. If you can spend just a couple of moments touching in with the subtle body, the feelings won't be driving the bus. That doesn't mean they will go away, but there will be some space around them and this will provide room for intelligence to arise so that you can really be with the other person.

Sometimes you will feel very stressed and start reciting the mantra "So much to do, so little time." Agitation, anxiety, and speediness will build up in your subtle body. You might be able to temporarily relieve yourself of these feelings with exercise, yoga, or various pacifying and distracting activities, but once these feelings accumulate, if you don't work with them directly, they tend to persist. Acknowledging feelings is the first step in working with them. Once you acknowledge them, locate where they are in your subtle body, and spend time making friends with them with this subtle body practice.

From Into the Mirror: A Buddhist Journey through Mind, Matter, and the Nature of Reality by Andy Karr

OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**

CLASS 2 - OUTLINE (Mar 27)

Part ONE: Emotions & Behaviors

Video 1: "How Our Brains Feel Emotion" (8:39) - Antonio Damasio

Video 2: "The Brain is a Servant of the Body" (5:36) - Antonio Damasio

Reading 1: "Feeling Our Emotions" by Julie Beck

Video 3: "Highlights of Atlas of the Heart" (3:35) – Brene Brown interview on NBC

Reading 2: "Excerpts from 'Atlas of the Heart'" – by Brene Brown

Class Discussion

Video 2: "The Extended Mind" (3:51) by Annie Murphy Paul

Reading 3*: "*Where Does Great Thinking Come From?" by E. Balcetis

Video 4: "Discussing Aspects of Emotional Intelligence (EQ)" (5:28)

Video 5: 'What is Emotional Intelligence?" (4:41)

Reading 4: "Understanding Emotional Intelligence and Its Effects on Your Life" by Erin Gabriel

Class Discussion

Part TWO: 'HIDDEN BRAIN' Podcast

Topic A - ENVY

HB Podcast 1: "What Happens When Envy Turns Ugly?" (18:00) (Feb. 2018) Envy can be both benign and malicious: it's an unflattering, miserable emotion. And it's universal. All of us, at some time or another, will experience that feeling of wanting what someone else has, and resenting them for having it Envy has a purpose. It's a tool for social comparison, one that can alert us to imbalances in the social hierarchy and can prompt us to improve our lives. But envy can also turn malicious, causing us to feel resentment, rage, and a desire for revenge. We'll explore emotions that can inspire us to become better people, or to commit unspeakable acts.

Reading 4: "Intergroup Schadenfreude: Motivating Participation in Collective Violence'
by Mina Cikara

HB Podcast 2: "How the 'Hidden Brain' Does the Thinks For Us" (7:32) Interview with Shankar Vedantam

Class Discussion

<u>Reading #1:</u> *"Feeling Our Emotions"*

Antonio R. Damasio

According to noted neurologist Antonio R. Damasio, joy or sorrow can emerge only after the brain registers physical changes in the body.

Scientific American MIND (April 2005)
by Julie Beck

FOR CENTURIES, the fleeting and highly subjective world of feelings was the purview of philosophers. But during the past 30 years, Antonio R. Damasio has strived to show that feelings are what arise as the brain interprets emotions, which are themselves purely physical signals of the body reacting to external stimuli. Born in 1944 in Lisbon, Portugal, Damasio has been chair of the University of Iowa's neurology department since 1986. He and his wife, neurologist Hanna Damasio, have created one of the world's largest databases of brain injuries, comprising hundreds of studies of brain lesions and diagnostic images. As profound as some of the damage is to Antonio Damasio's patients, all of it informs his understanding of how emotions and feelings arise and how they can affect mental illness.

In recent years, Damasio has become increasingly interested in the role emotions play in our decision- making processes and in our self-image. In several widely popular books, he has shown how certain feelings are cornerstones of our survival. And today he argues that our internal, emotional regulatory processes not only preserve our lives but actually shape our greatest cultural accomplishments.

MIND: Professor Damasio, why are you so fascinated by the nature of human emotion?

Antonio R. Damasio: At first, I was interested in all types of neurological injuries. If one area of the brain would lose its ability to function, the patient's behavior could change either dramatically or only subtly. One day I asked myself, what is missing in a person who can pass an intelligence test with flying colors but can't even organize his own life? Such patients can hold their own in completely rational arguments but fail, for example, to avoid a situation involving unnecessary risk. These kinds of problems mainly occur after an injury to the forebrain. As our tests prove, the result is a lack of normal emotional reactions. I continue to be fascinated by the fact that feelings are not just the shady side of reason but thatthey help us to reach decisions as well.

MIND: You differentiate between feelings and emotions. How so?

Damasio: In everyday language we often use the terms interchangeably. This shows how closely connected emotions are with feelings. But for neuroscience, emotions are more or less the complex reactions the body has to certain stimuli. When we are afraid of something, our hearts begin to race, our mouths become dry, our skin turns pale and our muscles contract. This emotional reaction occurs automatically and unconsciously. Feelings occur after we become aware in our brain of such physical changes; only then do we experience the feeling of fear.

MIND: So, then, feelings are formed by emotions?

Damasio: Yes. The brain is constantly receiving signals from the body, registering what is going on inside of us. It then processes the signals in neural maps, which it then compiles in the so-called somatosensory

centers. Feelings occur when the maps are read and it becomes apparent that emotional changes have been recorded—as snapshots of our physical state, so to speak.

MIND: According to your definition, all feelings have their origin in the physical. Is that really the case?

Damasio: Interestingly enough, not all feelings result from the body's reaction to external stimuli. Sometimes changes are purely simulated in the brain maps. For example, when we feel sympathy for a sick person, we re-create that person's pain to a certain degree internally. Also, the mapping of our physical state is never completely exact. Extreme stress or extreme fear and even physical pain can be dismissed; the brain ignores the physical signals that are transmitting the pain stimulus.

MIND: The differentiation between emotions and feelings brings to mind 17th-century philosopher Ren Descartes' idea of dualism—that the body and mind represent autonomous systems. But you reject that idea, as you explain in your book *Descartes' Error*. How should we see the relationship between mind and body?

Damasio: To me, body and mind are different aspects of specific biological processes. Philosopher Baruch Spinoza supported views similar to mine, regarding the body and soul question, shortly after Descartes' time. In his *Ethics* he wrote: "The object of the idea which constitutes the human mind is body." Spinoza thereby anticipated the findings of modern neurobiology.

MIND: Indeed, in your latest book, *Looking for Spinoza*, you describe the man as "a mental immunologist developing a vaccine capable of creating anti-passion antibodies." So, is only a life free of passions a good life?

Damasio: Spinoza fascinates me not only because he was ahead of his time with his ideas on biology but also for the conclusions, he drew from these ideas about the correct way to live life and set up a society. Spinoza was a very life-affirming thinker. He recommended contrasting the negative emotions such as sadness and fear with joy, for example. He understood this kind of practice as a way to reach an inner peace and stoic equanimity.

MIND: What are some of the other functions that feelings have, in addition to helping us make decisions?

Damasio: My interest now extends way past the question of decision making. In our lab, we are working more intensely with social feelings such as sympathy, shame or pride—they form a foundation for morality. Neurobiology doesn't simply help us to better understand human nature but also the rules of social interaction. Yet to really grasp this, we need a broader research approach: along with cognitive and neurological sciences, many of the humanities could contribute, especially anthropology and sociology.

MIND: It seems your research also extends into defining consciousness. What role do emotions play? What role does the body play?

Damasio: Consciousness, much like our feelings, is based on a representation of the body and how it changes when reacting to certain stimuli. Self-image would be unthinkable without this representation. I think humans have developed a self-image mainly to establish a homeostatic organism. The brain constantly needs up-to-date information on the body's state to regulate all the processes that keep it alive. This is the only way an organism can survive in an ever-changing environment. Emotions alone— without conscious feelings—would not be enough. Adults would be as helpless as babies if they suddenlylost their self-image.

MIND: Animals also must possess consciousness, then?

Damasio: I do believe that animals develop a very basic self-concept—what I refer to as "core self." But to have a broader self, such as we do, requires an autobiographical memory.

MIND: Do you believe that we will someday be able to create artificial consciousness and feelings?

Damasio: An organism can possess feelings only when it can create a representation of the body's functions and the related changes that occur in the brain. In this way, the organism can perceive them. Without this mechanism there would be no consciousness. It is unclear that this could ever develop in a machine or whether we really want machines with feelings.

MIND: Will research on emotions help lead to better forms of therapy for psychiatric illnesses?

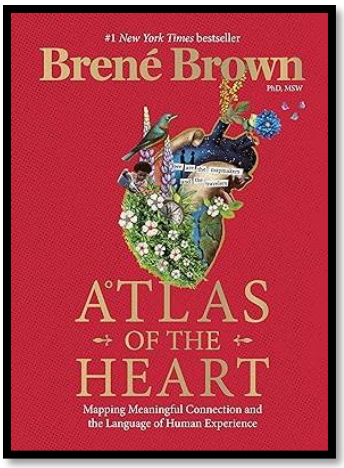
Damasio: Without question. Emotional disorders form the core of most psychological illnesses—a good example of this is depression. Specific treatments will be developed in the future, such as new types of medicine that target distinct cellular and molecular systems. Other forms of therapy are also sure to benefit, from traditional psychotherapy to social intervention.

<u>Reading 2:</u> *"Atlas of the Heart – Mapping Meaning Connections and the Language of Human Experience"*

by Brene Brown (Random House Publishing Group)

Introduction: *(Text edited for length.)*

"If we want to find the way back to ourselves and one another, we need language and the grounded confidence to both tell our stories and to be stewards of the stories that we hear. This is the framework for meaningful connection."



How It's Going

Although I started honing my power of observation in kindergarten, I officially began studying the connection between how we think, feel, and act over twenty years ago. In addition to researching, I now spend most of my time writing, talking to and learning from social scientists and experts on my podcasts, and working in organizations with leaders who are scaling courage-building skills and creating culture change.

In some ways a lot has changed, and in other ways not enough has changed. For example, today if you ask me to identify the biggest barriers to developing brave leaders or cultivating courage in our family or bringing justice to communities, I'd go right back to what I believed was true about people when I was a kid:

- People will do almost anything to not feel pain, including causing pain and abusing power;
- Very few people can handle being held accountable without rationalizing, blaming, or shutting down; and
- Without understanding how our feelings, thoughts, and behaviors work together, it's almost impossible to find our way back to ourselves and each other. When we don't understand how our emotions shape our thoughts and decisions, we become disembodied from our own experiences and disconnected from each other.

When I think about this data, I think back to the quote from the philosopher Ludwig Wittgenstein that I came across in college, “The limits of my language men the limits of my world.”

Language speeds and strengthens connections in the brain when we are processing sensory information. But newer research shows that when our access to emotional language is blocked, our ability to interpret incoming emotional information is Significantly diminished.'

Our ability to accurately recognize and label emotions is often referred to as *emotional granularity.* In the words of Harvard psychologist Susan David, "Learning to label emotions with a more nuanced vocabulary can be absolutely transformative." But those who are able to distinguish between a range of various emotions "d much, much better at managing the ups and downs of ordinary existence than those who see everything in black and white;" In fact, research shows that the process of labeling emotional experience is related to greater emotion regulation and psychosocial well-being.

Making Meaning

Eduardo Bericat, a sociology professor at the University of Seville, say; "As human beings we can only experience life emotionally:' My hope for this book is that together we can learn more about the emotions and experiences that define what it means to be human - including the language that allows us to make sense of what we experience.

In the following chapters, we're going to explore eighty-seven emotions and experiences that have been organized into groups I say emotions *and* experiences because some of these are not emotions - they're thoughts that lead to emotion. And if you asked ten emotion researchers which ones of these are emotions, you'd probably ~ ten different answers. The NYU neuroscience professor Joseph LeDoux explains, "It's been said that there are as many theories of emotions as there are emotion theorists."

The matter is complex because human emotions and experiences are studied from the perspective of philosophy, sociology, psychology, neuroscience, medicine, and mental health (to name just a few disciplines), and research topics include studies of facial expression, physiology, brain imaging, genetics, personality traits, cross-cultural analysis, and more.

Paul Ekman (a leading expert himself) concluded that these authorities have come much closer to agreement on many emotion topics. He states that the more recent survey found "broad areas of agreement about the evidence for some of the major issues about the nature of emotion:' For example, 80 percent of emotions experts now agree that there are universal voice and facial expression signals that reflect our emotional experience.

One area that remains under debate is how many human emotions and experiences exist. Ekman believes there is clear evidence for seven universal emotions (although he really talks about these as emotion "families"). He also believes that there are ten additional emotions that are close to having sufficient evidence for being universal and eleven more on which the jury is still out. Emotion researchers Alan Cowen and Dacher Keltner believe that at least twenty-seven or twenty-eight emotions are required to convey the range of human experience.

The list of emotions and experiences that I present in this book first emerged from a content analysis of comments from an online courses I was teaching tad several main sections on emotion and story. From 2013 to 2014, 66,625 participants were enrolled in the course. After going through the human subjects approval process, I analyzed the data using two questions:

What are the emotions and experiences that emerge the most often, and which emotions and experiences do people struggle to name or label?

This yielded approximately 150 emotions and experiences. From here, we invited a group of experienced therapists who work in diverse mental health settings to a focus group process that I led. The therapists' experience ranged from addiction and community mental health to college counseling to inpatient

psychiatry and individual and group psychotherapy. We posted all 150 of the emotions and experiences on the walls of the room, and the clinicians were asked to physically tag them with red, yellow, or green stickers based on this criteria: *In my experience working with clients, the ability to name this emotion or experience is essential to being able to process it in a productive and healing manner.*

Reading #3: *"Where Does Great Thinking Come From? Look Beyond the Brain"*

Annie Murphy Paul

Washington Post Outlook - June 18, 2021
By Emily Balcetis

THE EXTENDED MIND
The Power of Thinking Outside the Brain
By Annie Murphy Paul
338 pp. Houghton Mifflin Harcourt. $28.

Anni Murphy Paul, a biology and social science writer, argues that the problem with our thinking about intelligence is that we believe it solely resides within the isolated organism of the brain. Her revolutionary thesis challenges us to rethink what we think about thinking. Our bodies, our social networks and our surroundings, she argues, are "extra-neural" inputs that have a profound influence on cognition. Intelligence can be found, in part, in our brains, but perhaps even more importantly in our hearts and skin, in the architecture of the physical spaces we surround ourselves with and in the friendships we keep.

As a result of our mistaken beliefs, we've focused our efforts to get smarter on our brains. It is quite possible that we have invested our time and money in the wrong ways, as we haven't seen the advances in society and ourselves that we are capable of realizing. Our outdated assumptions about where intelligence comes from also leave us flummoxed by paradoxes like this one: how London resident Ben Pridmore can remember the order of 1,400 randomly shuffled playing cards but can't remember his friends' birth dates.

However, if we accept Paul's premise and change our thinking about the source of great thought, we can revolutionize childhood education; transform the health-care system; take concrete steps to improve diversity, equity and inclusion in the workplace; outperform the market; and find the source of motivation, innovation and well-being in our personal pursuits.

In "The Extended Mind," Paul branches out from her previous books, "Origins: How the Nine Months Before Birth Shape the Rest of Our Lives" and "The Cult of Personality Testing: How Personality Tests Are Leading Us to Miseducate Our Children, Mismanage Our Companies, and Misunderstand Ourselves." In this volume, she teaches us about socially distributed cognition. She engagingly weaves together diverse narratives to explain this form of intelligence, which isn't found in just one person but emerges as multiple minds collaborate. Paul recounts a story told by Edwin Hutchins, a naval psychologist, who was on board the aircraft carrier Palau when its engines failed. The captain, navigator, quartermaster chief and navigation team jerry rigged the machinery; they pooled their brawn and brains to avert disaster as the ship barreled through the water, speeding for San Diego Harbor.

In another story, Paul describes the synergy and cohesion in teams that participate in morning calisthenics routines that are broadcast over Japanese radio and are followed by corporate executives from Toyota and

Sony, public school children, and all types of people in between. In a third, she drops us in the middle of a fight between Brad Bird, an Academy Award-winning Pixar director, and John Walker, his producer, as they work out the animation details for "The Incredibles." Paul explains how their abrasive yet mutually respectful communicative style, which they publicly display for their teams to see, is so critical to their collaborative success.

To illustrate the impact of physical spaces on cognition, Paul tells the stories of those in a unique career path who experience both the bane and the beauty of their environs: astronauts. We hear about the inspiring majesty of Alan Shepard's view as one of the first to see what our planet looks like from space. Paul juxtaposes that with the visual boredom that the Mir space station's claustrophobic capsules induced for NASA astronaut Michael Foale, and how he farmed "space broccoli" inside as a self-prescribed cure.

To explore how our surroundings shape how we think, Annie Murphy Paul talked to an astronaut who'd spent time aboard the cramped Mir space station.

Paul tells the story of Montaigne, a 16th-century thinker who might have been the first to design a man cave and style it in ways to promote deep thought. She shares reflections by the American architect Louis Kahn on the transformative effect on mental well-being of the 150-foot ceilings in ancient Roman public baths, and his rationale for why the monolithic pillars of the Salk Institute that frame the view of the Pacific Ocean in San Diego can foster expansive thinking. And she evaluates the upsides and downsides of modern "hoteling," or non-dedicated working spaces, on the productivity and creativity of office workers.

In probing the contents of those offices, Paul evaluates the treadmill desk. Scoff as many of us might, she couples the experiences of Nobel laureates like Daniel Kahneman and Carl Wieman with contemporary neuroscientific studies to explain the benefits of physical movement for cognitive focus and memory. She uses this work to convincingly highlight how the daily routines at school — with their relative dearth of recess time — are doing a disservice to the development of children's attention span. Paul heralds the unusual technique of medical students at the Universitaire Pitié-Salpêtrière in Paris, who act out the physical sensations of Parkinson's tremors and cerebellar syndrome's slurred speech to learn about neurological disease and inspire more research on these ailments.

Paul does not offer do's and don'ts for designing childhood education centers, corporate office floor plans, public parks or our own homes. She does not advise directly on how to prepare for a public address at a shareholders meeting, how to gesture to most effectively persuade others or how to best take advantage of the collective intelligence of teams. However, the diverse and deeply researched information she presents about the impact of our surroundings, our bodies and the people around us on our thought process can certainly be translated into that. Our minds are bigger than our brains, and if we embrace that fact, there's so much more we can accomplish.

Reading #4: *"Understanding Emotional Intelligence (EQ) and Its Effects on Your Life"*

CNN.COM - July 26, 2018
By Erin Gabriel

You might think you're fairly intelligent, but are you emotionally intelligent? Experts say emotional intelligence -- the ability to read, understand and respond to emotions in ourselves and others -- is crucialin predicting our health, happiness and success.

It's our emotional intelligence that gives us the ability to read our instinctive feelings and those of others. It also allows us to understand and label emotions as well as express and regulate them, according to YaleUniversity's Marc Brackett.

Most of us would probably like to think that we can do all of the above. We spot and understand emotions in ourselves and others and label them accurately in order to guide our thoughts and actions.

But many of us tend to overestimate our own emotional intelligence, according to Brackett, a professor in the Child Study Center at Yale and founding director of the Yale Center for Emotional Intelligence.

That's important because experts say the ability to read, understand and respond to emotions in ourselves and other people is a crucial factor in predicting our health, happiness and personal and professional success.

What is emotional intelligence?

The theory of emotional intelligence -- and the term itself -- originated at Yale and the University of New Hampshire. Peter Salovey, the 23rd president of Yale University, and John Mayer, professor of psychology at the University of New Hampshire, wrote up the theory in 1990, Brackett said.

Their work demonstrated how emotions had a marked impact on an individual's thinking and behavior, said Robin Stern, associate director for the Yale Center for Emotional Intelligence and an educator, author and licensed psychoanalyst.

Experts have continued to build on that framework to refine definitions of what exactly is at the core of emotional intelligence. "Emotional intelligence is being smart about your feelings. It's how to use your emotions to inform your thinking and use your thinking to inform your emotions," she said.

It's having an awareness of how your emotions drive your decisions and behaviors so you can effectively engage with and influence others, said Sara Canaday, a leadership speaker and author. Individuals who are emotionally intelligent tend to be empathetic, can look at situations from an alternative point of view, are considered open-minded, bounce back from challenges and pursue their goals despite any obstacles they might face.

"Some people think of emotional intelligence as a soft skill or the ability or the tendency to be nice. It's really about understanding what is going on for you in the moment so that you can make conscious choices about how you want to use your emotions and how you want to manage yourself and how you want to be seen in the world," Stern said. "People with more emotional intelligence are healthier, happier and more effective," Brackett said.

Why emotional intelligence matters

Canaday further suggests that emotional intelligence is a better predictor of career success than an impressive résumé or a high IQ score.

Well ... just reflect on your own work experiences, Canaday suggests. Has anyone you worked with ever been let go or asked to leave, even when they had the competency or technical skills for the job?

"We might be hired for technical talents, but we are often fired because we lack emotional intelligence," Canaday said. Individuals with a low level of emotional intelligence can be successful, she said, but she argues that thoseindividuals could be even more successful if they had a higher level of emotional intelligence.

"It is how well you can collaborate, how well you engage with others and influence. It's the stories you can tell, the way you can bring data to life in a way that connects with others. Those are the things that are going to set you apart."

Emotional intelligence tests

Behavioral scientists have created a number of emotional intelligence self-assessments, usually broken down into "your ability to manage yourself, your ability to manage relationships, your self-awareness and your social awareness," according to Canaday.

Your results will be measured along with others who have taken the assessment to give some indication of where you fall on the spectrum from low to high emotional intelligence. But Brackett warns that "measurement is a tricky subject."

In his early research, he found that people tend to overestimate their emotional intelligence, which is why he believes you must measure it through performance assessments. In a performance assessment, people are required to problem-solve; they must decode facial expressions or strategize in an emotionally tense situation. That way, their knowledge and skills can be tested as opposed to their beliefs about them.

Another form of an emotional intelligence test is a "360-assessment." In the workplace setting, a 360 assessment is a process involving feedback from colleagues and supervisors evaluating a person emotional intelligence. Canaday believes that we often "see ourselvesdifferently than others do."

When a coworker takes the 360-assessment of you it provides an opportunity to compare it to your self-assessment. Another way to take a 360-assessment without undergoing a formal test is to ask a trusted adviser, perhaps a current or former boss, to evaluate your emotional intelligence, she said.

But Canaday cautions, If you ask for someone's feedback, be prepared to accept what they share. "This stuff can feel very personal. On one hand, we say we want to learn and grow, but on the other hand, we want to be accepted just the way we are, and those two human traits run counter."

Can I improve my emotional intelligence?

So maybe you need to improve your emotional intelligence. How do you do that? From the earliest ages, children should be taught how to recognize their emotions, understand what those emotions mean and label them accurately in order to express and manage themselves, Stern said.

For adults who did not receive a solid education on emotional intelligence, improving will require some hard work. Canaday suggests creating an action plan including specific goals. "Pick one or two areas where you want to grow, and get some advice on how to best start to embody whatever factor of emotional intelligence you are trying to develop." If you are trying to gain better control of your anger, for example, you might find a healthy outlet for it --whether it be yoga, meditation or boxing.

Canaday also suggests seeking out perspectives from those who may not agree with you. "Be intentional about that. Take active steps to do that. If you constantly surround yourself with people who believe just like you do, then you are hearing the same conversations, and you are not growing, and you are not learning to be open to perspectives."

Brackett advises seeking out strategies that are effective for managing emotions. Practice them and then evaluate how those strategies are working for you. It's important to "spend time reflecting on and thinking about your influence and how people respond to your emotions, be more self- and socially aware about your presence."

Stern suggests prolonging the time between when you are triggered by something and when you respond. Pause, slow down and take a deep breath. Imagine what your best self looks like. Taking the time to pause and think about what your best self would do in each situation may help you avoid letting your emotions control you. You are allowing yourself time to manage your emotions. It can also have a huge impact on our emotions and our health if that self-talk isnot positive, Stern says. She suggests that we would never talk to another individual the way we often talk to ourselves. "There is no question in my mind that if people were to really appreciate how important emotions are, allowed themselves to have emotions, made space for other people to have their emotions and handledthose emotions skillfully in the service of making a better world, we would in fact have a better world."

Reading #5: *"Intergroup Schadenfreude: Motivating Participation in Collective Violence"*

Social Psychological and Personality Science – 2nd Qtr., 2017
By Mina Cikara – Dept. of Psychology, Harvard University

The emotion of schadenfreude

Schadenfreude is a type of joy, albeit one that is very specific and seemingly atypical. Whereas joy is typically experienced when someone is pleased about a desirable event, schadenfreude is evoked when someone is pleased about an event that is undesirable for somebody (the English language has no direct comparable word). People who identify strongly with their social groups frequently experiencepleasure when they observe threatening out-group members' misfortunes: a phenomenon termed intergroup Schadenfreude. Though people are generally averse to harming others, they may learn to overcome this aversion via the consistent pairing ofsubjective pleasure with out-group pain, thereby lowering the barrier to participating in collective violence. In neuroimaging studies, intergroup Schadenfreude is associated with engagement of ventral striatum (VS), a brain region involved in reinforcement-learning. In these experiments, VS activity predicts increased harm and decreased help toward competitive out-group members. Experiencing this pleasure-pain association in intergroup contexts is particularly pernicious because it can generalize to people who are merely affiliated with a threatening out-group but have done nothing to provoke harm.

We reliably divide the world into "us and them." On one hand, we reap numerous material and psychological benefits from being able to identify and cooperate with fellow in-group members. On the other hand, group-life produces pressure to conform within groups and intractable conflict between groups. Intergroup conflict has been described as 'one of the greatest problems facing the world today'.

By some counts, the last century has seen over 200 million people killed in acts of genocide, war, and other forms of group conflict. How do we reconcile this statistic with rapidly accumulating evidence indicating that people are fundamentally averse to harming one another? Social psychology has a long and rich tradition of studying how and why good people do bad things. More recent research has homed in on better understanding collective violence — violence people commit on behalf of their social groups.

This area of inquiry lies at the intersection of two questions: 1) why does acting on behalf of a group sometimes make individuals behave in ways that violates their personal beliefs and moral standards, and 2) how do people overcome their aversion to doing harm in order to participate in collective violence? People who identify strongly with their social groups often experience intergroup Schadenfreude — *pleasure in response to threatening out-group members' misfortunes*. This is arguably a natural if not adaptive response in zero-sum environments: negative outcomes for 'them' indicate positive outcomes for 'us,' and so they elicit pleasure.

Experiencing Schadenfreude in response to observing out-group members' pain is, however, very different from being responsible for causing out-group members' pain (i.e., participating in collective violence). I propose that intergroup Schadenfreude is a natural response that supports the learning of an otherwise repugnant behavior*: doing harm to others*. If observing outgroup members' pain is consistently accompanied by feeling pleasure, people may learn over time to endorse and do harm to individual out-group targets. It is especially important to understand this phenomenon as it unfolds in groups.

Motivation to do harm in an intergroup (as compared to an interpersonal) context significantly increases opportunities for violence because 1) harm can be justified as being morally necessary in the absence of any personal grievance (e.g., in defense of the in-group and its values), and 2) the pleasure-pain association generalizes to entire groups; individuals who have done nothing to provoke violence become targets by virtue of their affiliation with a competitive, threatening out-group.

Seeds of intergroup conflict: categorization and competition

The ability to categorize people into social groups is not only advantageous for survival, but also useful for guiding one's own, and predicting others' behavior. Social categorization allows us to generalize our existing knowledge about social groups to novel targets. In contrast to other forms of categorization (e.g., fruits vs vegetables), social categorization is unique in that people also categorize themselves. The process of shifting from an individual ('I' or 'me') to collective ('we' or 'us') self-concept is called social identification. This process includes recognizing both that one belongs to the group and that the group is a central part of the self (e.g., 'I don't just live in America, I am American'). Identification leads people to prefer — and contribute greater resources to — fellow in-group members relative to everyone else. Note that in the absence of conflict, inequitable resource allocation and intergroup bias in general are better explained by in-group favoritism rather than out-group hostility.

Despite its centrality to group formation and maintenance, 'in-group love' is not sufficient to ignite intergroup conflict. This is why only some groups elicit aggression while most others elicit indifference. Instead, intergroup violence is driven by competition over resources and incompatibility between groups' goals (e.g., violence against Jews in prewar Europe, brawling among rival sports fans). Even when groups are not explicitly engaged in competition, social groups with success-oriented values or access to resources are stereotyped as competitive and thus, sometimes sabotaged (e.g., Asians, professional women). Competition increases perceptions of threat and shifts the mechanism driving intergroup bias from in-group favoritism to out-group antipathy.

Why do groups change individuals' behavior?

Participation in collective violence requires that people behave in ways that likely conflict with their personal moral standards. Several circumstances enable people to engage in objectionable behavior: a) when it is possible to reframe and/or justify the action as serving a greater good; b) individuals' sense of personal responsibility is mitigated by obedience to authority, anonymity, or diffusion/displacement of responsibility; and c) the salience of individuals' own moral standards is low. However, none of these explanations is unique to intergroup contexts. These circumstances could lead individuals in crowds to

engage in immoral behavior out of individual self-interest. t. Furthermore, by many of these accounts, people are not actively choosing to act immorally so much as they are reflexively responding to the pressures exerted by the situation.

One crucial condition for acting on behalf of a group in general — and for collective violence in particular — is high identification and coordinated behavior with the ingroup. Under certain conditions, group identification can crowd out or become 'fused' with one's individual identity, motivating people to act as representatives of the group rather than individual agents. When this occurs, group goals supersede individual goals. In cases where the in-group's goals require harming the out-group, people do not comply mindlessly. Instead, people who are highly identified with the group deliberately choose to endorse or do harm because they believe it is the right thing to do. They do so even at great personal cost; increased identity fusion is correlated with greater willingness to fight and die for the in-group.

Overcoming aversion to doing harm in intergroup contexts

Over the last 60 years, psychologists have posited many explanations for how people overcome their aversion to harming others, including, but not limited to moral disengagement and shifting attitudes about violence to reduce dissonance. These explanations are not unique to intergroup contexts. However, several features of group life facilitate the deployment of these processes. Specifically, dehumanization and the disruption of empathy enable moral disengagement and rationalization of out-group harm.
One key insight, however, is that the absence of empathy is not antipathy: it is callousness. Failures of empathy may allow people to feel indifference toward out-group suffering, but should not promote active harm. For example, people may cross the street to avoid speaking to a homeless man, but they rarely go out of their way to harass him. On the other hand, pleasure in response to others' misfortunes — *Schadenfreude* — or displeasure in response to others' triumphs — *Gluckschmerz* — are feasible motivators of collective violence.

Professor Cikara studies how the mind, brain, and behavior change when the social context shifts from "me and you" to "us and them." She focuses primarily on how group membership, competition, and prejudice disrupt the processes that allow people to see others as human and to empathize with others.

OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**

CLASS 3 - OUTLINE (Apr 3)

Part ONE: Emotions & Behaviors

Podcast 1: "The Nocturnal Brain; Why We Sleep" (7:24) NPR's Dave Davies with Dr. Guy Leschziner

Reading 1*:* "Mapping the Darkness: Unlocking the Mysteries of Sleep" by Samantha Harvey

Video 1: "Experts in Emotion: "GENDER & EMOTION" (9:06) Marianne LaFrance & June Gruber

Class discussion

Reading 2*:* "Chp. 3 – "Tracking the Hidden Brain: How mental disorders reveal…" by Shankar Vedantam

Reading 3: "She's Never Felt Pain or Anxiety. Now Scientists Know Why" by Heather Murphy

Reading 4: "New 'Brain Atlas' Maps the Complex Organ In Dazzling Detail" by Carolyn Johnson

Class discussion

Part TWO: 'HIDDEN BRAIN' Podcasts
Topic A - LONELINESS

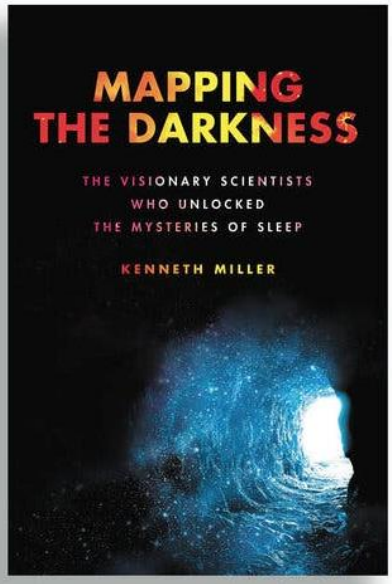
HB Podcast 1: "Lonely American Male: How American Masculinity Creates Lonely Men" (Edited 17:47) (Mar 19, 2018) Boys get the message quickly: a man is supposed to be strong and independent. That message, researchers say, has widespread consequences for men's social lives and physical health. Suicide rates among middle-aged men in America have shown a sudden, distressing increase in the last decade. (Original 53:54)

Reading 5: a) 'The Crisis of Masculinity' & **b)** 'Why Men Cry' by Niobe Way

Reading 6: "Pandemic Lab: The Loneliest Americans Aren't Reconnecting" by Christopher Shea

Class discussion

Reading #1: *"MAPPING THE DARKNESS: The Visionary Scientists Who Unlocked the Mysteries of Sleep"*



NY Times Book Review - Oct. 2, 2023
By Samantha Harvey

In 1979, the surgeon general, Julius Richmond, launched Project Sleep, a research and educational initiative to increase the understanding of insomnia and other sleep disorders, and to further their treatment. Tremendous excitement ensued within a sleep science community that had been working largely unrecognized and underfunded for decades. Project Sleep could, at last, turn decades of arcane study into policy. Actual change. Praise be!

A year later, the incoming Reagan administration pulled the plug on its funding, and Project Sleep was over. Sleep scientists went back to their labs, divested a few more cats of a cerebral cortex in the name of research, and carried on working, once more, in obscurity.

Such is the lot of this stumbling, star-crossed, ridiculed, irrepressible branch of science. "Mapping the Darkness" is a propulsive, utterly engrossing history of the subject, seen through the prism of four of its prominent contributors. Author Kenneth Miller traces the work of Nathaniel Kleitman, Eugene Aserinsky, William Dement and Mary Carskadon; the last, still living, provided "many hours of interviews" for the book.

Miller's broadness of vision and baffled wonder at this great "invisible continent" of sleep, and the work undertaken to navigate it, may spring from the fact that he is a writer, editor and journalist rather than a sleep specialist, and approaches the subject with a beginner's — or at least outsider's — eye.

At the same time, Miller's narration of the subject is commanding, bright and deft. His prose cuts and flows through the last century of impossibly complex stop-start progress in the measuring and quantifying of sleep — why we do it, and how. None of it is simple and all of it is captivating.

Scientific progress often arises from a meeting of determination and happenstance. This has been especially true of sleep science, a field that struggled, for most of the 20th century, to be taken seriously, and so frequently attracted people with perverse resolve and maverick brilliance.

Brain waves, the basis of all sleep science, were first recorded in the 1920s by Hans Berger, a German who had started out looking for a locus in the brain for "psychic energy" that might explain his sister's telepathy. He called these recorded brain waves EEGs — electroencephalograms. By capturing sleeping brain states, EEGs moved the discipline from esoteric to mainstream — from Freudian hypothesizing about dreams to the birth of neuroscience.

Kleitman, the great pioneer and patriarch of the subject as we know it, went into sleep research after escaping first Russia and then Lebanon (where, as a Russian in World War I, he became a prisoner of war) and ended up, by guile, chance, tenacity and a few forged documents, in the United States. His aspirations to become a medical doctor were so thwarted by antisemitic prejudice that he had to settle for an arm of science that barely yet existed and in which nobody was interested: sleep.

His student, Aserinsky, who discovered the phenomenon of rapid eye movement, or REM, did so by looking, for want of something better to do, at eyelid movement in sleeping subjects. Aserinsky's assistant, Dement, intended to be a psychiatrist but realized, while in one of Kleitman's lectures, that in order to know about the waking brain, one needed to study sleep. As he put it, "During that lecture it occurred to me that the way

to understand consciousness is to understand what must be given up to enter unconsciousness."

Then there's Carskadon, who drove policy changes around school start times to better suit the sleep needs of teenagers. The only prominent woman in a history that is depressingly, overwhelmingly male, Carskadon was left-field: a cousin of Dement's wife who ambled, with no formal qualifications, into a long and fruitful career in sleep research.

Miller is superb at identifying and then interweaving the multiple confluences of this sprawling subject. There are interesting discussions of sleep disorders and of the impact of impaired sleep on society. But the most fascinating of the book's threads is that of REM sleep — *le sommeil paradoxal,* as it has been called. First there was the link, discovered by Aserinsky, Dement and Kleitman, between REM and dreams, and then the subsequent decades of research into what this state is, where in the brain it happens, when it happens and its purpose.

I found myself studding the margins with exclamation marks, as Miller carries the reader through these dark mysteries, leading us to points of light that serve only to illuminate more mystery. We learn that REM sleep is what the French researcher Michel Jouvet called a "third state of the brain, as different from sleep as sleep is from wakefulness." If deprived of it, we experience a "REM rebound" as soon as we sleep again — we plunge more quickly into the REM phase and stay there longer, to compensate. In Miller's hands, sleep is a territory of seductive, wondrous mystery, and his great achievement is balancing rigor and awe.

"One of the paradoxes of sleep science (and, perhaps, most other sciences)," Miller writes, "is that it often violates the precepts of Occam's razor — the principle that between two competing theories, the simpler explanation is to be preferred." We've long known that there is nothing simple about sleep; Miller introduces us to its farthest reaches. Our growing understanding of this stubborn, beautiful enigma will inform our waking consciousness, too.

Samantha Harvey is the author of "The Shapeless Unease: A Year of Not Sleeping."

Reading #2: *"Tracking the Hidden Brain - How Mental Disorders Reveal Our Unconscious Lives (Chp. 3)*

How Our Unconscious Minds Elect Presidents, Control Markets, Wage Wars, and Save Our Lives

by Shankar Vedantam (Random House Publishing Group)
CHAPTER 3: *(Text edited for length.)*

The reason people have no awareness of the hidden brain is that it is usually not accessible through introspection. Turning the spotlight of our attention inward does not reveal a subterranean world. But there are times in the course of everyday life when we are suddenly made aware of the hidden brain—not byits presence but by its absence. Scientists, researchers, and clinicians regularly encounter patients withhidden-brain impairments. As Abraham Tesser and others have shown through experiments, and as Freud intuited through experience, the hidden brain regularly causes people to make the same errors over and over in their lives. Couples that sabotage each other in order not to admit being vulnerable.

Simply put, the technique teaches patients to become mindful of unconscious thought patterns. The alcoholic may feel his addiction is completely beyond his control, but it turns out there are patterns to his behavior: He tends to drink after he gets a paycheck, or when he walks by a favorite bar, or after a fight with his wife.

It's the same with depression and other mood disorders. People feel their emotional problems are largely caused by external events. There is little doubt that losing a job or a spouse can be devastating, but a core insight of all talk therapy is that a large portion of how we feel about our lives rests within ourselves, in unconscious patterns of thought and habit. Treating psychiatric ailments with medications achieves the same thing. Neurochemical changes make patients feel better about themselves.

While these insights are increasingly well established in clinical science, the role of the hidden brain is disregarded in most other realms. It takes an unusual disorder to reveal that the basic elements of everyday life—morality, kindness, and love—rely on the unconscious mind.

Evelyn Sommers is a clinical psychologist, and Brian told her about Wendy's lack of emotional connection to work, to life, and to him. They discussed the possibility that Wendy was suffering from depression, an outgrowth of her lengthy recovery from surgery, or the scale-back in lifestyle that had come with Brian's retirement.

Wendy told the stranger about patterns in his tattoos that he had not seen himself. Brian felt the strange events were like shadows. They were here one moment, gone the next. But the odd events kept occurring—with increasing frequency. Wendy went up to men she didn't know, admired their hair, and asked if she could touch their beards. Sometimes she didn't ask. Brian feared for her safety. The people she stopped were shocked but guarded. What would happen if she accosted a stranger who was dangerous?

At home, Wendy walked around at night looking at shadows, searching for patterns. She owned a lot of antique glass, and these nocturnal trips often involved visits to her china and dishware collection. She wasn't a Midas reveling in her possessions; she just had an insatiable urge to run her fingers over ridges of all kinds and was drawn to intricate patterns in glassware.

Finally, the neurologist Tiffany Chow produced a diagnosis: Wendy had a disorder known as frontotemporal dementia. Although Wendy's symptoms for this disorder began around the time she had her partial hysterectomy, in all likelihood the two issues were not related. The McNamara's had simply had two pieces of bad luck arrive at the same time.

The frontal and temporal lobes are craggy outgrowths of the brain handed down to us by our evolutionary ancestors. The Taj Mahal and the Eiffel Tower, spaceships and classical art, laws and governments—civilization itself—are products of these brain areas. We do much of our important thinking here. We analyze and forecast things, make choices, and form judgments. As with the rest of the brain, much of what the frontal and temporal lobes do is unconscious. They shape our ability to judge social situations and make aesthetic judgments. And they provide us with the prick of conscience when we do something wrong.

There are many neurological disorders that affect the brain, but none may be as curious as frontotemporal dementia. Unlike Alzheimer's disease, which begins by robbing the memory while leaving other aspects of brain functioning intact, frontotemporal dementia affects a part of the brain that subtly and secretly regulates our social behavior. The frontal and temporal lobes tell us whether it is polite to reach across a crowded dinner table for a dish, and how to greet someone we know only slightly. They tell us whether the person who catches our eye across a crowded bar is just scanning the room or looking meaningfully at us. They allow us to experience the pleasures of comradeship and teamwork. People with frontotemporal dementia often have extremely acute powers of observation and analysis—meaning that the analytical parts of their brain are working fine—but they don't have table manners. In Wendy's case, the gradual disintegration of her ability to judge socially appropriate behavior from inappropriate behavior took nothing away from her ability to rapidly count the wheels of transport trucks and to identify subtle patterns on the bark of a tree.

The vast majority of rules of human interaction are not written down or even articulated. There is no rule

book that tells you when it is appropriate to knock on someone's door and suggest a drink. When you do it, whom you do it with, and how often you do it all matter.

It doesn't take long when you transplant someone from India to the United States, or from the United States to India, to quickly grasp that the social rules have changed. People adjust to new rules swiftly and automatically, because the hidden brain is highly skilled at orienting itself in new cultural contexts. Healthy people grasp and follow social rules without conscious effort. We do not realize how important these rules are, because we don't do the work of acquiring and following the rules—our hidden brain does it for us.

She may consciously claim responsibility for her answers, but it is really her hidden brain that conducts those analyses, and we know this is true because patients with frontotemporal dementia who do socially inappropriate things have their powers of analysis intact. They can reason their way through life, but it turns out that reason is an inadequate guide in many social situations. It is only when the machinery of the hidden brain breaks down that we suddenly recognize its importance.

Much of this book is about errors and biases caused by the hidden brain. The automatic conclusion is that bias is bad and we should do everything we can to rid the brain of unconscious thinking. If we could only think consciously all the time, we would avoid all the mistakes of the hidden brain. That is partially true, but it is also true that the hidden brain can be our friend. It tells us how to navigate the world, it creates the foundation for our lives as social creatures, it enmeshes us in the web of relationships that make life meaningful. Without the hidden brain, we would not be supercomputing machines that everyone envies. We would be sad creatures, locked out from the very things that make life precious. We would lose the

ability to work collegially with others, to form lasting friendships, and to fall in love. Our hidden brain is like the wetness of water that the fish never notices—but can't live without.

It turns out that the most important aspect of being a law-machinery of the hidden brain breaks down that we suddenly recognize its importance. Much of this book is about errors and biases caused by the hidden brain. The automatic conclusion is that bias is bad and we should do everything we can to rid the brain of unconscious thinking. If we could only think consciously all the time, we would avoid all the mistakes of the hidden brain. That is partially true, but it is also true that the hidden brain can be our friend. It tells us how to navigate the world, it creates the foundation for our lives as social creatures, it enmeshes us in the web of relationships that make life meaningful. Without the hidden brain, we would not be supercomputing machines that everyone envies. We would be sad creatures, locked out from the very things that make life precious. We would lose the ability to work collegially with others, to form lasting friendships, and to fall in love. Our hidden brain is like the wetness of water that the fish never notices—but can't live without.

They also lose their jobs, because it turns out that much of our professional lives is not about the excellence of our work but about the creation and maintenance of social bonds. One study of sixteen patients with frontotemporal dementia found that among them, the group was guilty of "unsolicited sexual approach or touching," hit-and-run accidents, physical assaults, shoplifting, public urination, breaking into other people's homes, and even one case of pedophilia. The patients readily acknowledged their actions were wrong—but showed no remorse. They knew they were breaking the law, but it didn't matter to them.

Many of our social institutions—and laws in particular—implicitly assume that human actions are largely the product of conscious knowledge and intention. We believe that all we need for a law-abiding society is to let people know what is right and what is wrong, and everything will follow from there. Even when we acknowledge the power of unconscious influence, we believe it can be overcome by willpower or education. When confronted by people who say they understand the law but break it anyway, we lock them up and throw away the key, because in our schema, these have to be bad people. The law does not realize that most law-abiding behavior has little to do with conscious knowledge and motivation.

The researchers found something curious. Patients with damage to parts of the brain that regulate social behavior did not reach different conclusions from the others. Rather, when it came to the highly charged problems, where people had to choose between two actions that both had terrible consequences, these patients did not experience the distress that normal people felt. They reacted rationally, without emotion. In the scenario involving enemy soldiers combing through a village, the crying child would die anyway if the party hiding in the cellar were discovered, so it is irrational not to smother the child and save the lives of all the other people. Most normal people, however, find the idea of smothering their own child—or any child—unbearable. Patients with damage to a brain area known as the ventromedial prefrontal cortex had no trouble stripping away the emotional component of the problem. From a purely mathematical perspective, it is always better to save many lives instead of one.

Research studies into brain disorders that affect social behavior suggest that our basic notions of right and wrong do not spring from what we learn in textbooks and Sunday school, or from laws handed down by messiahs and legislators, but from parts of the brain we hardly understand. Joshua Greene, a Harvard neuroscientist and philosopher, told me that much of what we call ethics and morality, in fact, might not be handed down to us by holy books and human laws, but handed up to us by algorithms in the hidden brain, ancient rules developed in the course of evolution. People with normal brain functioning do not need to be taught to care about social relationships, and social relationships lie at the heart of all morality. Does this mean people have no responsibility for immoral actions? Of course not. We have responsibility for not only our conscious minds, but our unconscious minds as well.

If we want a moral society, we must actively recruit the help of the hidden brain. We must devise laws that take advantage of our awareness of social rules, and don't just take advantage of our knowledge of the Frontotemporal dementia is not the only disorder that affects the hidden brain.

From schizophrenia and autism to anxiety and depression, patients with a wide range of mental disorders experience damage or dysfunction to parts of the brain that are responsible for unconsciously regulating our behavior. Addictions to heroin, cocaine, or nicotine hijack pathways in the unconscious brain. Once rewired, the hidden brain powerfully manipulates the conscious mind to act against its own will and to justify behavior that is obviously self-destructive. In the case of autism and schizophrenia, a variety of unconscious brain mechanisms go awry.

Changes in brain regions known as the amygdala and the prefrontal cortex appear to be the reason patients with schizophrenia often have trouble reading other people's facial expressions. The ability to read expressions feels like a conscious skill but turns out to be a largely unconscious process—and an essential component of social judgment. Everyday life depends on our ability to make a series of unconscious assumptions, and one of them is to trust that the food served to us at a clean restaurant is good food.

In a world where we have nothing to go on but our rational minds, the simplest things can paralyze us because it can take huge amounts of time for our conscious brain to think about every scenario deliberately. If we didn't have our hidden brain to weed through thousands of scenarios and to guide our attention to the most pertinent questions, we would quickly become overwhelmed, because bad things can potentially happen to us in every conceivable situation. Everyday life requires us to suspend rationality, to be mindless about countless risk.

Reading #3: *"She's Never Felt Pain or Anxiety. Now Scientists Know Why."*

Jo Cameron, at 71 has a rare disorder in which she experiencesno pain or anxiety.

NEW YORK TIMES - March 30, 2019
By Heather Murphy

An article this week about Jo Cameron, who has lived for 71 years withoutexperiencing pain or anxiety because she has a rare genetic mutation, prompted questions from New York Times readers.

The notion that the same gene could be responsible for the way a person processes physical and psychological pain left many perplexed: Aren't theytotally different? Or does her story hint that sensitivity to one type of pain might be intertwined with sensitivity to another? Childbirth, Ms. Cameron said, felt like "a tickle." She often relies on her husband to alert her when she is bleeding, bruised or burned because nothing hurts. When someone close to her has died, she said, she has felt sad but "I don't go to pieces." Shecannot recall ever having been riled by anything — even a recent car crash.On an anxiety disorder questionnaire, she scored zero out of 21. "I drive people mad by being cheerful," she said. Here's a bit about what's known:

Do those who live without pain also live without anxiety?

No. Before encountering Ms. Cameron, the scientists who studied her caseworked with other patients who did not experience pain. "Reduced anxiety has not really been noted before in the other pain insensitivity disorders we work on," said Dr.James Cox, a senior lecturer from the Molecular Nociception Group at University College London.

He also said that given Ms. Cameron had gone more than six decades without realizing just how unusual she was,there could be others like her. A number of such individuals contacted The Times after the article was published.

"I also had the children and no pain," wrote Juanita Hoffman, 81, of Dayton, Ohio. "I thought family and friends whocomplained were just drama queens." Asked about her mental state, she wrote: "No, I have never experienced anxiety. I have always been content and happy."

How could a genetic mutation wipe out anxiety?

Dr. Cox said he believed that Ms. Cameron's reduced anxiety was "related to increased signaling at CB1 receptors,"or cannabinoid receptors, which are known to help the body deal with stressful situations. (Notably, they are activated by the THC in cannabis.)

Block the cannabinoid receptors and anxiety will increase; boost the cannabinoid receptors and anxiety willfall, studies have shown. The receptors also affect how people experience physical pain.

Does that mean physical and mental pain are processed the same way?

No, it's more complicated than that and lots of research is still needed, said Dr. T.H. Eric Bui of the Center for Anxiety and Traumatic Stress Disorders and Complicated Grief Program at Massachusetts General Hospital. Whatwe do know, he said, is that "brain regions that process emotional and physical pain overlap."

In another example of how mysteriously intertwined the two types of pain can be, he noted that acetaminophen (the active ingredient in Tylenol, among other pain relievers) had been shown to decrease theemotional pain that comes with rejection.

So, is rejection similar to physical pain?

Naomi Eisenberger, a professor in the University of California, Los Angeles, psychology department, believes so. Dr. Eisenberger studies the similarities in the way that the brain processes physical pain and the "social pain" that results from rejection. She said she had repeatedly found that "people who are more sensitive to physical pain aremore upset by rejection."

Do low-anxiety people seem to feel less pain?

In general, yes, according to some pain-management experts. Adam Woo, a consultant in pain and anesthesia at King's College Hospital in London, has worked with thousands of patients dealing with pain. Patients with high levels of anxiety tend to be more sensitive to pain, he has found. "If you have anxiety, it makes your perception of

pain worse," he said. And if two patients are facing the exact same kind of injury, the one with more anxiety tends to have a "higher complaint score," he said.

Why do anxious people seem to have a lower pain threshold?

Debra Kissen, executive director of Light on Anxiety, a treatment center in Chicago, believes that some people trulyare just more sensitive — as in they seem to feel more intensely. That said, she has observed the way that anxiety and physical pain can amplify each other. Afflicted with chronic pain, a person may start to feel anxious that they have no control over their body. Then their anxiety may increase their focus on the pain, exacerbating it. Treat either one and it will sometimes help both, she said.

What she finds most intriguing about the two kinds of pain is the consistency in her patients' answers to a choice."I'll ask someone, 'You can either stub your toe and it hurts an eight, or feel emotional despair,'" she said. Patientsalways pick the toe.

<u>Reading #4:</u> *"New 'Brain Atlas' Maps the Complex Organ In Dazzling Detail"*

A dynamic map created using diffusion MRI tractography shows bundles of fiber that carry nerve signals between the brain and body and within brain.

Hope is that they get an understanding of what goes wrong in human brain diseases.

Washington Post – Oct 12, 2023

By Carolyn Y. Johnson

Scientists have recently unveiled the most detailed and complex portrait yet of the human brain in a dazzling catalogue of more than 3,000 types of brain cells that collectively give rise to emotion, thought, memory and disease. To put that number in perspective, there might be 100 cell types that make up the lung.

This painstaking work is part of the Brain Research Through Advancing Innovative Neurotechnologies (BRAIN) initiative, a $3 billion government-funded effort to develop tools and technology to understand and map the human brain.

"Each part of the brain is as complex as another organ," said Ed Lein, a neuroscientist at the Allen Institute for Brain Science, and a leader of several of the new studies. "This is the first really sort of comprehensive description of this," he said. "If we don't understand it at that kind of level of granularity, I don't know how we're ever going to understand brain diseases."

The papers reveal that the cell types that make up a human brain are similar to those that make up other primate brains. That suggests there are differences in how those cell types are combined, and in the activity of just a few hundred genes, that helps to explain the sophisticated cognitive abilities that humans have. The papers also provide a glimpse of how these techniques could be used to detail how the human brain changes over time, how much typical adult brains are different from each other and how the developing brain becomes vulnerable to complex disorders such as autism and schizophrenia. Henry Greely, a law professor at Stanford University who specializes in the ethics of biomedical technologies likened it to sending a spaceship to circle another planet and take photos. "You see where there are mountains and valleys, and you see the ice caps, and that is what the work on the brain has done," he said. "It has shown a really complicated object, maybe the most complex physical object we know of in the universe so far," Greely added.

A dauntingly vast organ

Over a century ago, Spanish neuroscientist Santiago Ramón y Cajal made some of the first intricate sketches of different kinds of brain cells. But the human brain is dauntingly vast, an intricate assemblage of 86 billion neurons and roughly the same number of glial cells. The brain initiative, announced a decade ago, supercharged the classification scheme by using the newly developed ability to classify different cell types by their precise molecular characteristics, including which genes are active.

Other projects are examining the brains of people's Parkinson's and Alzheimer's disease, disorders whose onset and precise mechanisms still remain largely mysterious. "The challenge with many neurological and neuropsychiatric disorders is we don't know what portion of the brain is functioning non-optimally," said John Ngai, the director of the brain initiative. "The cool thing here is this gives us a way in."

"When it started five years ago, I was thinking, 'We are just going to get through this at-lasing phase. "The longer we've been in it, it's amazing to me our genome can produce such a diversity of cells across the brain. It's fundamental to how our brain works."

The ultimate hope is that they get a fine-grained understanding of what goes wrong in human brain diseases that have stubbornly resisted much progress. Many drugs that are promising in laboratory experiments ultimately fail when people use them. The work will help inform scientists trying to understand when an animal model, or even a simplified brain organoid grown in a dish, might be a reasonable approximation of a brain and when it falls short.

Reading #5a: *"Penn State and the Crisis of Masculinity"*

OPINION - Sunday Review - April 25, 2014

By Niobe Way, Ed.D. – New York University
By Elizabeth W. Dunn – Univ.of British Columbia

If you've ever been on a subway or public bus, you know the rules. Don't make eye contact, stay as far away from other people as the space allows, and for the love of God, don't talk to anyone. But what if the rules are wrong?

The behavioral scientists Nicholas Epley and Juliana Schroeder approached commuters in a Chicago area train station and asked them to break the rules. In return for a $5 Starbucks gift card, these commuters agreed to participate in a simple experiment during their train ride. One group was asked to talk to the stranger who sat down next to them on thetrain that morning. Other people were told to

follow standard commuter norms, keeping to themselves. By the end of the train ride, commuters who talked to a stranger reported having a more positive experience thanthose who had sat in solitude. She found that introverts and extroverts alike felt happier on days when they had more social interactions.

More surprisingly, interactions with weak ties correlated at least as highly with happiness as interactions with strong ties. Even the bit players in our lives may influence our well- being. In a recent study, we recruited people on their way into a busy Starbucks with a $5 gift card. We asked some customers to "have a genuine interaction with the cashier," smiling and having a brief conversation. Others were told to be as efficient as possible: Get in, get out, go on with the day. Those who lingered left Starbucks feeling more cheerful. Efficiency, it seems, is overrated.

Even fleeting glances can make a difference. Many of us have had the experience of what the Germans call "wie Luft behandeln" ("to be looked at as though air"). The social norm of avoiding eye contact seems harmless, but it might not be. In an experiment conducted at a large Midwestern university, a college-age woman walked by people on campus and either made eye contact, smiled at them while making eye contact, or directed her gaze "beyond the ear of the passer-by," deliberately avoiding eye contact. She was trailed by another researcher, who surveyed people in her wake. Those who were looked at as though they weren't there reported feeling more disconnected from others.

Simply acknowledging strangers on the street may alleviate their existential angst; and being acknowledged by others might do the same for us. (One caveat: Another set of studies has shown that people are motivated to flee from strangers who stare at them intently.)

The benefits of connecting with others also turn out to be contagious. Dr. Epley and Ms. Schroeder found that when one person took the initiative to speak to another in a waiting room, both people reported having a more positive experience. Far from annoying people by violating their personal bubbles, reaching out to strangers may improve their day, too.

Rather than fall back on our erroneous belief in the pleasures of solitude, we could reach out to other people. At least, when we walk down the street, we can refuse to accept a world where people look at one another as though through air. When we talk to strangers, we stand to gain much more than the "me time" we might lose.

Yet these teenage boys will also tell you something else. They will tell you not only that boys aren't really like that, but that they shouldn't be, because it's bad for their health. Boys will say things like "It might be nice to be a girl, because then you wouldn't have to be emotionless" or "My ideal best friend is a close, close friend who I could say anything to... 'cause sometimes you need to spill your heart out to somebody and if there's nobody there then you gonna keep it inside, and you will have anger. So, you needsomebody to talk to, always." The hundreds of boys that have participated in my studies, from across thecountry and of all races, underscore their desire for emotional expression, for intimate friendships and for the importance of such expression for their mental health. Decades of research support my findings.

Sociologist Kirsten Springer studied 1,000 middle-aged men, and found that those who most rigidly adhered to ideals of masculinity (such as emotional stoicism and toughness) reported the worst physical health over a 40- year period. Psychologists Joseph Pleck and James Mahalik also found that adhering to norms of masculinity such as emotional stoicism for boys and men is significantly associated with poor mental and physical health and with high rates of risky behavior and violence.

Primatologist Frans De Waal, developmental psychologist Michael Tomasello and evolutionary anthropologist Sarah Hardy, among many other scientists, conclude that we need a complete "overhaul" inour conceptions of human nature to account for the extensive research that underscore our deeply empathic, cooperative, and relational nature. Caring about what others think and feel is the reason why, according to Charles Darwin, we have survived as a species. Being emotionally sensitive and caring aboutothers is not a sign of

being “girly” or “gay” but a core element of being human, essential for surviving andthriving.

Yet, we raise our boys to strive for emotional stoicism, independence and autonomy. We tell our teenage boys not only to think for themselves, but also not to care about what others think or feel. We foster ways of being that are not natural and do not bring about psychological or physical wellbeing for boys or men. What happened at Penn State is the result of raising boys in this way — boys who are taught to go against their nature grow up to be disconnected from their humanity.

If we help boys — and men — to stay connected to their humanity, we will, according to the research, see fewer examples of such brutal behavior. Psychologist Mary Gordon created the “roots of empathy” program in Canada 15 years ago — a program that is being implemented in hundreds of schools — to foster empathy among boys and girls. This program has significantly decreased the rates of bullying and aggressive behavior among boys and girls in schools.

It’s time we understand that being human and being a man should be one and the same; that the reason why we have survived for so long as a species is because we, men and women, care about others and respond when others are in danger and need our help.

These are answers that would have prevented a lifelong trauma for the children who were victims at Penn State.

Reading #5b: *“Why Men Act Crazy”* By Niobe Way, Ed.D.

This morning, my 11-year-old son asked me what Anthony Weiner that had done put him on the front page of the news last week. I told him. He asked me whether that was similar to what Tiger Woods or Arnold Schwarzenegger had done. I said yes. Why, he asked, do men “act so crazy?” I told him that I would tell him a story about what happens to boys growing up in America, drawn from decades of research, that would help him understand.

Once upon a time in the latter part of the 20th century, a little boy named “Allboys” was born. Like all boys, Allboys had a tremendous capacity for empathy and kindness and a desire for a rich emotional life filled with loving relationships. For the first few years of his life, his capacities were fostered, and his desires were fulfilled. His mother arranged playdates for him, encouraged him to share his toys with his friends and be sensitive to their feelings. His father would give him a bear hug when he camehome, and his mother would snuggle with him at bedtime.

As Allboys grew older, his emotional and social capacities and desires remained but they were no longer fostered or fulfilled. When he expressed his concerns to his parents about these changes, they would say things like: “you are no longer a little boy,” “big boys don’t cry” and “be strong.” They no longer spoke about thinking of other people’s feelings or sharing. In fact, they no longer had intimate conversations with him at all. His father told him this was all a part of becoming a man.

Allboys still, however, had a best friend with whom he shared all his deepest secrets; he knew he could count on this friend for anything. Yet as he reached the age of 16, the closeness in this relationship also diminished. He didn’t really know why but was aware that others thought the friendship was “weird,” “gay,” and “girly.”

Allboys grew up to be a successful businessman with a loving wife. Yet, oddly enough, he found himself doing things that were crazy, risking his marriage and his career but doing it anyway. He didn’t understand why. He just knew that he was acting crazy. Eventually he lost everything that mattered.

When we raise our boys to be men in the most stereotypic of ways — when we raise them to believe that they must separate from those they most love (parents and friends) and not feel their own feelings or those of others — we are raising them to go against their nature. Thus, they grow up to be men who act “crazy.” Data from a wide range of experts, from neuroscientists, developmental psychologists to

primatologists and evolutionary anthropologists, indicate that empathy, close relationships, and love are not only human capacities and needs, they are at the root of why we have thrived as a species. Yet we continue to make valuing close relationships and being empathic into something girly or gay rather than simply human and critical for wellbeing.

Furthermore, researchers, including my own over the past twenty years, find that gender differences in our social and emotional capacities and needs have been greatly exaggerated. Boys are, in fact, more emotional in the first year of life than girls (e.g., they cry more easily) and they are just as relationship-oriented as girls. In addition, they are just as likely as girls to seek emotionally intimate same-sex friendships. It is only with age, as boys become men, that we see dramatic gender differences with boys becoming less empathic, less likely to have close same-sex friendships, and more likely to commit suicide.

Our modern notions of maturity and manhood, with its emphasis on separation and stoicism to the exclusion of connection and vulnerability, are at the root of why men treat themselves and others so poorly. According to the research, if we were to value, instead, empathy and kindness and emphasize the importance of maintaining loving relationships with family and friends for both boys and girls, men and women, we would end up with lower divorce rates, better friendships, lower rates of bullying and drug and alcohol use, longer life spans, and fewer men who act crazy. That seems like a worthwhile investment for us and for our children.

Reading #6: "*The Loneliest Americans Aren't Reconnecting"*

Even as society opens back up, some measures of social isolation remain alarmingly high.

Washington Post OUTLOOK – July 22, 2021
By Christopher Shea – The Pandemic Lab

The COVID States Project has been probing American behavior (and attitudes) during the pandemic since March 2020. In 12 survey waves, an array of researchers — from Northeastern, Northwestern, Harvard and Rutgers — have polled some 185,200 Americans about subjects ranging from social distancing practices to attitudes toward vaccines and judgments about state politicians' leadership. The consortium's 55th report, issued this month, looked at social isolation — something many of us have experienced over the past year and a half. The focus was on the most isolated people: those who said they had one or zero people to turn to for help in various kinds of crises. One of the more striking findings, as David Lazer, a professor of political science and computer science at Northeastern, explained in a recent interview, is that even as vaccines have arrived and society has opened up, some measures of loneliness have not abated. The interview has been edited for length and clarity.

Q: You have four measures of social isolation. People are asked to say how many people they could turn to for help if they fell ill; how many people might lend them money; how many people they could talk to if they had a personal problem or felt sad; and how many people could help them if they needed a job. If they answer "one" or "none" to those questions, they are considered socially isolated. When you average those four measures, roughly 37 percent of respondents were socially isolated in

late April 2020. That's a strikingly high percentage. Do you have a figure from before the pandemic, to put that number into context?

A: If I were to give my biggest regret, it's that I wish we had done a survey in January — but what can you do? We weren't planning on there being a pandemic in March. We can compare dynamics during the pandemic, but we don't have a great baseline from before it.

Q: Let's focus on that composite figure for a minute: Roughly 37 percent of people report that they have zero or one person to turn to — on average, across the four measures — in late April 2020. But then something counterintuitive happens. The figure falls to about 33 percent by late May. That's at the height of the social shutdowns, yet the proportion of socially isolated people was dropping.

A: I need to be properly modest here about some of the patterns we see and can only offer speculation in some cases. There may have been a certain amount of solidarity in that particular, extreme moment, early in the pandemic. Then we sort of entered the long slog of social isolation, which had a cumulative effect on our relationships with one another.

Q: In general, the data shows isolation rising after that first burst of solidarity and peaking in September 2020. Then things generally get better after that. But the measure of one specific kind of isolation — emotional isolation, the question of whether you have someone to talk to about personal problems — just gets worse and worse.

A: Yes, the high point of social isolation for the emotional measure is in the survey from June that we just completed.

Q: What could possibly explain why people would feel lonelier over the past couple of months than they did a year ago?

A: Relationships are something that you have to cultivate. And so maybe there was someone that you would have felt comfortable calling up or reaching out to at the beginning of the pandemic, but then you haven't spoken to them in six months — and do you feel as comfortable reaching out? The negative spin I can give these numbers is that those relationships may have decayed somewhat, because you need that experience of casually getting together. You don't get together on Zoom just to chat and gossip for 20 minutes. But of course, in real life, we do that all the time. You bump into someone at work, you bump into someone in the street, and you get together with friends for dinner. Those serendipitous collisions sustain our connections, and without them relationships may have decayed, and the "reopening" we've experienced the last few months doesn't immediately bring our relationships back to where they were. Indeed, the reopening may make more apparent what we've lost. But I'll also put a more positive spin on it. It could be that people are revisiting some relationships. We've recently seen increases in people quitting their jobs. You don't want to quit a job at the height of a pandemic, but now maybe you think there are opportunities out there. The trends we're seeing could involve people purposefully rewiring their relationships — which has a short-term cost. Maybe some of your old relationships have decayed, but you're building new ones. And yet those new friends aren't "old friends" you can confide in yet. Maybe, on the positive side, that's the pivot that a lot of people are making.

Q: There has been a lot of discussion of the racial dimensions of the pandemic. Were Black Americans more likely to be isolated than White Americans?

A: It depends a little bit on the measure we're looking at. It does look like on the emotional side, White Americans were less likely to be socially isolated than other racial groups. That comes out pretty clearly in

the data. They were also less likely to be isolated in terms of having someone to care for them. But then, notably, they were *more* likely to be isolated in terms of the economic side. So White respondents were more likely generally to be socially isolated with respect to someone who would lend them money or might help find them a job. This could be because there are stronger norms of informal networks of social insurance among Hispanics and African Americans that involve, let's say, lending and borrowing money or helping people find jobs. It could be that different groups may also have different norms about what one can ask for or request help for. We don't really have a firm answer on that from just these data.

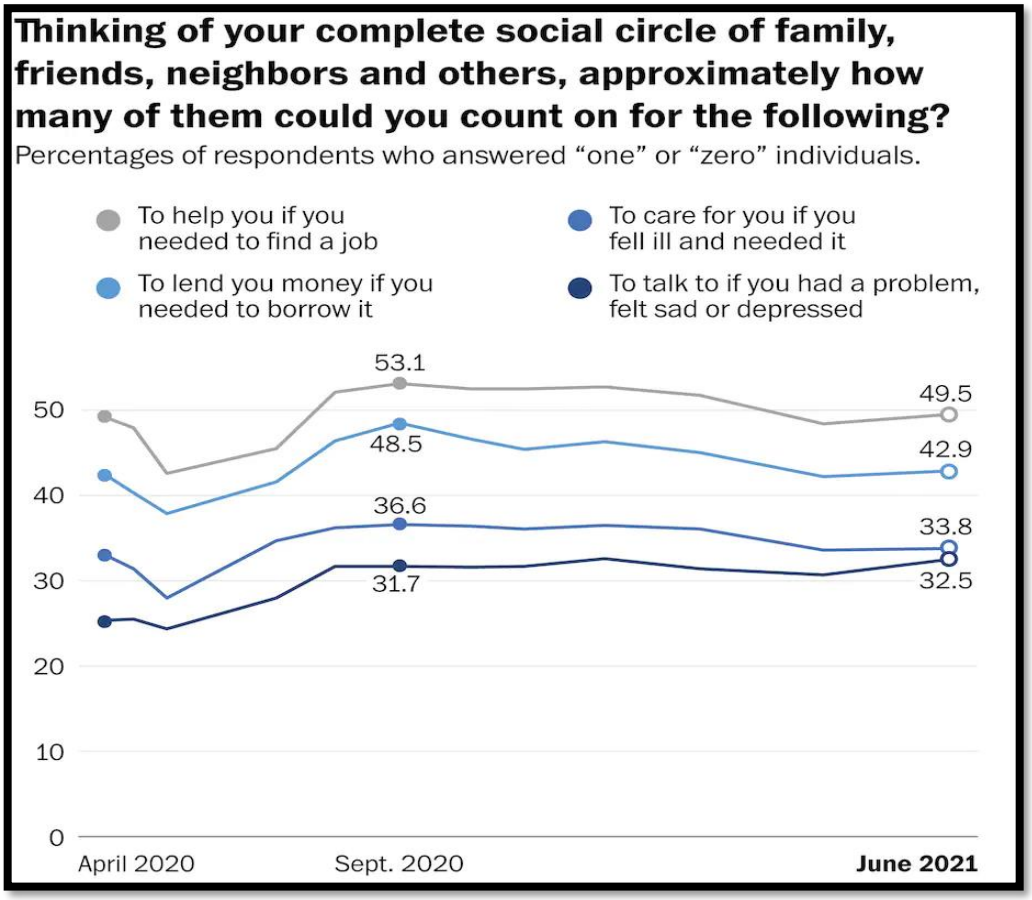
Q: What were some of the characteristics that protected people from social isolation?

A: Gender stands out. Men were more likely to be emotionally isolated, which fits with both stereotypes and literature, I'm afraid. And we found that religiosity really popped out as something that was protective: Our measure was whether people attended services "once a month or more" or "a few times a year or less." Attending services is something that you could continue to do during the pandemic, even if it was on Zoom. It's an interesting question whether we would have found the same result if we'd asked people if they were in a bowling league. We did not ask about other group activities. But it's clear that religiosity, as measured by attendance at religious services, was strongly, strongly protective.

Q: Loneliness can be dangerous, this report suggests. This population you have homed in on is at significant risk of depression — especially people who are emotionally isolated. The data show that a third or more of the group that has zero or one friend to talk to about problems reported signs of moderate depression.

A. Yes, emotional isolation has by far the strongest connection to depression. We have to be careful there: We can't say whether that's causal or not because, you know, all these things come together as a package. Depressed people might be less likely to have friends, for example. But there is a very strong correlation. The rate of depression in this group fluctuates around 36 percent or more — about 50 percent higher than the rate for people who are not emotionally isolated.

Q: And for context, about a third of respondents reported being emotionally isolated, as of June. A: That's right. And, in addition, there are much higher levels of depressive symptoms relative to levels before covid. That combination of high depressive symptoms and high levels of emotional isolation is deeply worrying. The question is: How long do our social networks take to bounce back? There really aren't good analogues in the research on social networks that provide guidance as to what is next.



OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**

CLASS #4 - OUTLINE (Apr 10)

Part ONE: Emotions & Behaviors

Video 1*:* "Compassion Why is It So Hard for Us?" (3:30) - T. Janpa
Video 2: "Empathy vs. Sympathy" (4:06) – Psych2go

Reading 1: "How Does Empathy Work?" by Mimi Swartz

Reading 2: "How Awe Can Improve Your Health" by Hope Rees

Class discussion

Video 3: "Happiness" (8:03) June Gruber with Daniel Gilbert

Video 4: "The Science of Hope" (7:13) – Dr. Chan Hellman

Part TWO: 'HIDDEN BRAIN' Podcasts
Topic A - TRUTH and DISHONESTY

Video 5: "The Truth About Dishonesty" (7:13) - Dan Ariel on Dishonesty.

HB Podcast 1: "Everybody Lies & That's Not Always Bad" (14:00) Exploring the psychology of lying vs. telling truth across different relationships and cultural circumstances over our lives. Dan Ariely has found thatwhat separates honest people from not-honest people is not necessarily character, it's opportunity. (Original 29:12 - Apr 4, 2018)

Reading 3: "Sampling the Cheating Life, in Bite-Size Pieces" by Janet Maslin

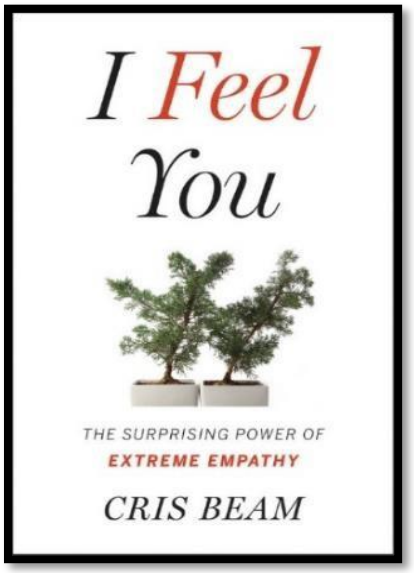
Reading 4: "Why Trump Supporters Don't Mind His Lies" by Daniel Effron

Reading 5: "Truth Is, Everyone Lies All the Time" by Edward Reynolds

HB Podcast 2: "As We Become Richer, Do We Become Stingier?" (5:43) **(**Sep. 3, 2013) A UCLA researcher saysscience shows that as people earn more money, they become more individualistic and less community oriented. As a result, they seem to donate less of their time and money, proportionally, than poorer people.

Class discussion

Reading #1): *"How Does Empathy Work?"*



A Writer Explores the Science and Its Applications

NY TIMES BOOK REVIEW - April 24, 2018
By Mimi Swartz

I FEEL YOU - The Surprising Power of Extreme Empathy
By Cris Beam (Houghton Mifflin Harcourt. 251 pp. $26)

Depending on your point of view, Cris Beam's "I Feel You: The Surprising Power of Extreme Empathy" might seem either laughably behind the times or naïvely, maybe even willfully, ahead — so far beyond our collective horizon as to be pretty darned invisible. After all, ours is an age when the president is more concerned with building walls than feeding and educating poor kids, Congress is polarized to the point of paralysis and just about everyone else is seemingly focused on getting theirs first. We've become a nation of hard cases, armed to the teeth, with fury battling cynicism for primacy as the default emotion. In this world, a book with a cover featuring one bonsai tree leaning lovingly toward another does not appear likely to find much of a place. And yet here is Beam passionately asserting that "the pendulum is swinging back toward feeling, back toward love and the communal. Back toward empathy."

We can only hope. "I Feel You" is less a prescriptive self-help book than a thoughtful exploration of empathy in all its forms — physiological, historical, sociological and even personal, as Beam struggles to transcend her own less than empathic episodes and explores her aversion to opening herself to change. "Self-empathy was code for selfish," she explains before signing up for a workshop on just that. "One more link in a long chain of American entitlement." This is a radical book because it challenges the conventional wisdom that self-defense and punitive systems are the only way to keep ourselves physically and emotionally safe, and, maybe more important, because it asserts that it's possible to work for the betterment of society without the accompanying side effect of feeling like a chump.

"I Feel You" is best thought of as a travelogue, with Beam an amiable and skeptical tour guide to places where a new understanding of empathy has led to new, successful applications. It's probably fortunate that she is a believer, but not an easy sell. Beam has done a lot of homework on her subject, and early on provides a lively distinction between genuine attempts at social change and what she calls "empathic design," corporate attempts to make us feel loved or needy or connected — with the goal that we buy more. As a Harvard Business Review story explains, "Enlightened companies are increasingly aware that delivering empathy for their customers, employees and the public is a powerful tool for improving products." Those adorable Facebook emojis are a case in point. Early in the book Beam tackles that default American compulsion to monetize even our deepest emotions, quoting, for instance, the headline of a Forbes article that offers that the best reason to teach empathy is "To Improve Education (and Test Scores)."

But this isn't where Beam puts her emphasis, even though this section is as entertaining as it is damning of American capitalism. She's looking instead for deeper cuts — to understand first whether empathy is inborn or a skill to be learned, and then, either way, to investigate how it can be applied to some of our most intractable problems. She takes the obligatory trip through the history of how empathy has been studied in the past and journeys to the neuroscience lab to see what discoveries are being made about how humans feel.

Some of the solutions she presents for deploying empathy in social situations may be familiar to those working in the fields of education and law. Restorative justice, for instance, "tries to weave a web of understanding and repair. It's messier than the decontextualized, one-two punch of crime and consequence. It's a humanized, empathic approach to what is, by design, the passionless metrics of the law." In practice, this means the student and teacher, or the playground bully and his or her victim, have an opportunity to talk about how they feel, a practice that would probably make the likes of Sean Hannity apoplectic. Special courts for prostitutes and veterans, where their behavior would be placed in context and they would be provided with housing and medical care, would also anger many. To the Fox News crowd, this might be called coddling. But studies of such diversionary programs are showing them to be more effective at preventing and reducing crime than the usual expulsions and prison sentences. And anyway, why not try? Few can claim that our conventional institutions are doing a great job. As Beam suggests, "at a time when the police, the whip-tail of our justice system, are finally being called out for their entrenched and learned brutality, this is the moment for overhaul."

In fact, much of this book is a gentle manifesto, urging readers to change their view of themselves and others — not a bad idea in such a polarized, screen-dominated age. If you cringe at the idea of attending a conference on nonviolent communication, here's your chance to explore why, and to try, vicariously, to put yourself in the shoes of a nemesis. It may not be such a good idea to start with XXXL villains like Donald Trump or Nancy Pelosi, but the mirroring exercise Beam recounts is truly — and a little sadly — revealing. Next time you have an argument with a spouse, co-worker or teenager, stop fighting for a minute and try repeating back to them exactly what they've said to you, without editorializing or overdramatizing. It's a humbling experience.

Shifting from individual to societal empathy, Beam has a moving section on Eugene de Kock, the notorious South African death squad chief who captured, tortured and killed many in the anti-apartheid resistance. Beam wanted to understand how a seemingly ordinary man could become the embodiment of evil, but she goes further to examine how he built a life of remorse during and after his prison term. It is heartening to see him reclaim his humanity by apologizing, one by one, to families of his victims, who can then — sometimes, but not always — let go of their anger and hatred. It's probably not an idea that will work with garden-variety sociopaths, or religious fundamentalists turned mad bombers, but it doesn't hurt to be reminded that there is usually some kind of groupthink behind acts of mass terror. If a society has to be rebuilt, as in Rwanda or the former Yugoslavia, then the question becomes how to move forward together. "When they acknowledge wrongdoing and show remorse, what should our response be?" one of Beam's sources asks. "Should we reject their apology and continue to punish them with our hatred? Or should we extend our compassion and invite them to journey with us on the road of moral humanity?"

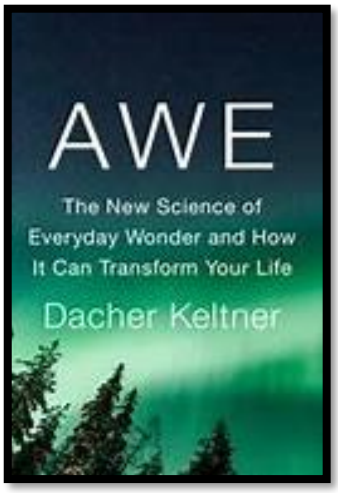
The latter is the tougher job. I wish that, along with her examination of the horrors visited on Native Americans and their subsequent attempts at making peace with their white oppressors, Beam had spent time investigating how empathy has acted between whites and African-Americans — maybe that was just too overwhelming, or too lacking in workable solutions. But even so, "I Feel You" is an important book. If it can't bring us around to empathy, maybe it can at least get us closer to civility and a very a good start.

Mimi Swartz is an executive editor of Texas Monthly and the author of the forthcoming "Ticker: The Quest to Create an Artificial Heart."

Reading #2): *"How a Bit of Awe Can Improve Your Health"*

Experts say wonder is an essential human emotion — and a salve for a turbulent mind.

New York Times – Science Times
By Hope Reese - Jan. 3, 2023



Awe can mean many things. It can be witnessing a total solar eclipse. Or seeing your child take her first steps. Or hearing Lizzo perform live. But, while many of us know it when we feel it, awe is not easy to define.

"Awe is the feeling of being in the presence of something vast that transcends our understanding of the world," said Dacher Keltner, a psychologist at the University of California, Berkeley.

It's vast, yes. But awe is also simpler than we think — and accessible to everyone, he writes in his book "Awe: The New Science of Everyday Wonder and How It Can Transform Your Life."

While many of us associate awe with dramatic, life-changing events, the truth is that awe can be part of everyday life. Experiencing awe comes from what Dr. Keltner has called a "perceived vastness," as well as something that challenges us to rethink our previously held ideas. Awe can be triggered from moments like seeing the Grand Canyon or witnessing an act of kindness. (About a quarter of awe experiences are "flavored with feeling threatened," he said, and they can arise, for example, by looking at a lion in a zoo or even gruesome videos of genocide.)

In his book, Dr. Keltner writes that awe is critical to our well-being — just like joy, contentment and love. His research suggests it has tremendous health benefits that include calming down our nervous system and triggering the release of oxytocin, the "love" hormone that promotes trust and bonding.

"Awe is on the cutting edge" of emotion research, said Judith T. Moskowitz, a professor of medical social sciences at Northwestern University Feinberg School of Medicine in Chicago. Dr. Moskowitz, who has studied how positive emotions help people cope with stress, wrote in an email that "intentional awe experiences, like walks in nature, collective movement, like dance or ceremony, even use of psychedelics improve psychological well-being."

So what is it biologically? Awe wasn't one of the six basic emotions — anger, surprise, disgust, enjoyment, fear and sadness — identified back in 1972, Dr. Keltner said. But new research shows that awe "is its own thing," he said. Our bodies respond differently when we are experiencing awe than when we are feeling joy, contentment or fear. We make a different sound, show a different facial expression. Dr. Keltner found that awe activates the vagal nerves, clusters of neurons in the spinal cord that regulate various bodily functions, and slows our heart rate, relieves digestion and deepens breathing.

It also has psychological benefits. Many of us have a critical voice in our head, telling us we're not smart, beautiful or rich enough. Awe seems to quiet this negative self-talk, Dr. Keltner said, by deactivating the default mode network, the part of the cortex involved in how we perceive ourselves.

But, Dr. Keltner said, even his own lab experiments underestimate the impact of awe on our health and well-being. If we can see these biological responses in experiments, he said, "just imagine what happens when you are watching a baby being born, or you encounter the Dalai Lama."

Sharon Salzberg, a leading mindfulness teacher and author, also sees awe as a vehicle to quiet our inner critic. Awe, she believes, is "the absence of self-preoccupation."

This, Dr. Keltner said, is especially critical in the age of social media. "We are at this cultural moment of narcissism and self-shame and criticism and entitlement; awe gets us out of that," Dr. Keltner said. It does this by helping us get out of our own heads and "realize our place in the larger context, our communities," he explained. The good news? Awe is something you can develop, with practice. Here's how:

Pay attention.

In 2016, Dr. Keltner visited San Quentin State Prison in California, where he heard inmates speak about finding awe in "the air, light, the imagined sound of a child, reading, spiritual practice." The experience changed the way he thought about awe. So Dr. Keltner teamed up with two other researchers to enlist people across America and China to keep journals about their awe experiences. He found out that people were having two or three of them each week.
"I was like, 'Oh, I can just take a breath and look around.' It doesn't require privilege or wealth; awe is just around us," he said.

When William B. Irvine, a professor of philosophy at Wright State University in Dayton, Ohio, wants to feel a sense of awe, he turns to science. "Science is everywhere, all of the time," he said. An alluring object or part of nature, for example, is a "piece of an incredibly beautiful puzzle." We often just think of the piece instead of the big picture, he said, "and that's a pity."

But once we think about the context, about what went into its creation, awe will follow. Focus on the 'moral beauty' of others.

One of the most reliable ways to experience awe, Dr. Keltner found, was in the simple act of witnessing the goodness of others. When we see others doing small gestures, like walking an older person across the street, we start feeling better and are also more likely to perform good deeds.

However, goodness in others is often overlooked, Dr. Keltner noted. "Our public discourse and academic discourse sort of forgets about how much good people can and want to do," he said.

Ms. Salzberg, whose forthcoming book includes a section about awe, also believes in the importance of this interpersonal wonder. She recommended paying attention to your neighborhood bus driver or grocery clerk, looking for those daily moments of kindness. If we notice those around us who are "dedicated to goodness or having a better family life than the one they were raised in or to being good to their neighbors," she said, we can strengthen our sense of awe.

Another tool to experience awe, Dr. Keltner said, is to spend time learning about inspiring people. Research suggests that watching videos of people like Mother Teresa or Mahatma Gandhi, for instance, can trigger awe. "Remind yourself of what they've written. Have quotes of them, have photos of them," he said. "Make them part of your life."

Practice mindfulness.

Distraction, Dr. Keltner said, is an enemy of awe. It impedes focus, which is essential for achieving awe. **"**We cultivate awe through interest and curiosity," Ms. Salzberg said. "And if we're distracted too much, we're not really paying attention."

Mindfulness helps us focus and lessens the power of distractions. "If you work on mindfulness, awe will come." And some studies show that people who are meditating and praying also experience more awe.

"Awe has a lot of the same neurophysiology of deep contemplation," Dr. Keltner said. "Meditating, reflecting, going on a pilgrimage." So, spending time slowing down, breathing deeply and reflecting — on top of their own benefits — have the added advantage of priming us for awe.

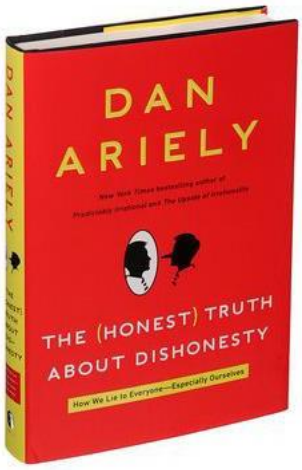
Choose the unfamiliar path.

Awe often comes from novelty. So gravitating toward the unexpected can set us up to experience awe. Some people do this more than others, a personality trait that experts have called an "openness to experience," Dr. Keltner said.

We can work on developing this openness through everyday choices. Choose a restaurant you don't usually visit, take a different route to work or check out some music you aren't familiar with.

In his book, Dr. Keltner wrote that people who find awe all around them, "are more open to new ideas. To what is unknown. To what language can't describe."

<u>Reading #3:</u> *"Sampling the Cheating Life In Bite-Size Pieces"*



The New York Times - June 28, 2012
By Janet Maslin

Book Review: "*The (Honest) Truth About Dishonesty,"*
By Dan Ariely (285 pages. Harper. $26.99)

Dan Ariely's new book is a all- encompassing thesis about the nature of cheating, He went to essay mills that supply dishonest students with research papers and commissioned 12-page papers about how cheating works. The essay mills sent him such junk that they allayed Mr. Ariely's immediate concerns about whether or not academic cheating really pays.

Such crazed gibberish accentuates the otherwise simple, cheery style in which "The (Honest) Truth About Dishonesty" is written. In a relatively brief time the very user-friendly Mr. Ariely has collaborated on so many experiments and research projects that he has become the James Patterson of social science. He has parlayed a few basic points into two earlier popular primers ("Predictably Irrational" and "The Upside of Irrationality"), many lectures and even smartphone apps that validate his most important premise: making people feel smart is a great marketing tool. They will buy things that tell them what they already know.

With that in mind Mr. Ariely, a professor of psychology and behavioral economics at Duke University, sets out to ask why and when cheating occurs, whether it is useful and how it can be discouraged. He also defines the paradoxical nature of dishonesty. In a conversational style drawn straight from the classroom he promises that "we will discuss what makes dishonesty rear its ugly head and how we cheat for our own benefit while maintaining a positive view of ourselves — a facet of our behavior that enables much of our dishonesty.") He will do this by staging many small, simple experiments that grapple with the obvious in science-made-easy fashion. For instance: If a refrigerator in a college dormitory contains cans of Coca-Cola and dollar bills, which will disappear faster? Hints: College students don't often want to perceive themselves as thieves. And they are often thirsty.

Mr. Ariely begins each part of this book with a clear point to make, sometimes using an anecdote about his own life. A number of these stories are old: one involves his youthful travels on a slightly forged Eurail pass, at a time when a suspicious train conductor could be placated with a tape of the Doors. ("They're a great American rock band.") After testing the idea behind the anecdote on a group of subjects, he will rhetorically

question his readers. ("What do you think happened?") And then he will summarize what happened and why.

It cannot have escaped the notice of Mr. Ariely or anyone in publishing that readers love the fast, blinky reasoning behind such books. And Mr. Ariely is an acknowledged leader in the field; he is often cited as an authority by other authors who overmine the same subject matter. It helps that this new book has a disarming personal touch, as when Mr. Ariely refers (as he has previously) to his painful experiences as a burn victim to prove a point: that dishonesty can be a good thing. He gratefully remembers being told during his long hospital stay that he would someday be all right, even when the medical evidence was less reassuring.

But most of this book is about the downside of cheating and lying. Mr. Ariely says that cheating is contagious, and that a group's behavior will have a powerful effect on each individual. Bottom line:

"There are rational forces that we think drive our dishonest behavior — but don't. And there are irrational forces that we don't think drive our dishonest behavior — but do." In other words, lying,cheating and Mr. Ariely's already famous predictable irrationality are all closely connected.

In offering practical applications from his insights Mr. Ariely turns to everything from golf to banking to political-action committees. For one relatively elaborate experiment a student actor is enlisted to behave badly — and set a standard for cheating — at Carnegie Mellon University. This figure wore a sweatshirt from the rival University of Pittsburgh, just to get the Carnegie Mellon students in a hostile, dishonesty-prone mood.

Mr. Ariely duly measured how the rest of the group responded when the actor obviously cheated on a test and what happened when he only seemed confused about how the rules of the test worked. Confusion-based dishonesty proved more contagious than the criminal kind.

Ultimately this sunny author believes that most people mean to behave honestly unless they are allowed to feel that minor cheating is justified. What to do? Mr. Ariely isn't strong on solutions. He suggests that honor codes and supervision help decrease dishonesty. But they aren't much of a match for the rationalization, self-deception, fatigue and slippery ethics that Mr. Ariely links to the lying game.

Dan Ariely is a professor of psychology and behavioral economics at Duke University.

Reading #4: *"Why Trump Supporters Don't Mind His Lies"*

NYTIMES - *GRAY MATTER* - April 28, 2018
by Daniel A. Effron

In his first 400 days in office, President Trump made more than2,400 false or misleading claims, according to The Washington Post. Yet a recent Gallup poll shows his approval ratings amongRepublicans at 82 percent. How do we square these two facts?

Some supporters no doubt believe many of the falsehoods. Others may recognize the claims as falsehoods but tolerate themas a side effect of an off-the-cuff rhetorical style they admire. Or perhaps they have become desensitized to dishonesty by the sheer volume of it. I suspect that there is an additional, underappreciated explanation for why Mr. Trump's falsehoods havenot generated

more outrage among his supporters. Wittingly or not, Mr. Trump's representatives have used a subtle psychological strategy to defend his falsehoods: They encourage people to reflect on how the falsehoods *could have been* true.

New research of mine suggests that this strategy can convince supporters that it's not all that unethical for a political leader to tell a falsehood — even though the supporters are fully aware the claim is false. Consider some examples. When President Trump retweeted, a video falsely purporting to show a Muslim migrant committing assault, Sarah Huckabee Sanders, the White House press secretary, defended him by saying, "Whether it's a real video, the threat is real."

On another occasion, Ms. Sanders admitted that Mr. Trump had made up a story about how Japan drops bowling balls on American cars to test their safety, but she argued that the story still "illustrates the creative ways some countries are able to keep American goods out of their markets." When asked about the false claim that Mr. Trump's inauguration had drawn the biggest inaugural crowd in history, Kellyanne Conway, counselor to the president, suggested that inclement weather had kept people away.

In each instance, rather than insisting the falsehood was true, Ms. Sanders and Ms. Conway impliedit *could have been* true. Logically speaking, the claim that more people could have attended the president's inauguration in nicer weather does not make the crowd any bigger. But psychologically, it may make the falsehood seem closer to the truth and thus less unethical to tell.

To find out if this strategy actually helps get politicians off the hook for dishonesty, I recently conducted a series of experiments. I asked 2,783 Americans from across the political spectrum to read a series of claims that they were told (correctly) were false. Some claims, like the falsehood about the inauguration crowd, appealed to Mr. Trump's supporters, and some appealed to his opponents: for instance, a false report (which circulated widely on the internet) that Mr. Trump had removed a bust of the Rev. Dr. Martin Luther King Jr. from the Oval Office.

All the participants were asked to rate how unethical it was to tell the falsehoods. But half the participants were first invited to imagine how the falsehood could have been true if circumstances had been different. For example, they were asked to consider whether the inauguration would have been bigger if the weather had been nicer, or whether Mr. Trump would have removed the bust if he could have gotten away with it.

The results of the experiments, published recently in Personality and Social Psychology Bulletin, show that reflecting on how a falsehood could have been true did cause people to rate it as less unethical to tell — but only when the falsehoods seemed to confirm their political views. Trump supporters and opponents both showed this effect.

Again, the problem wasn't that people confused fact and fiction; virtually everyone recognized the claims as false. But when a falsehood resonated with people's politics, asking them to imagine counterfactual situations in which it could have been true softened their moral judgments. A little imagination can apparently make a lie feel "truthy" enough to give the liar a bit of a pass.

These results reveal a subtle hypocrisy in how we maintain our political views. We use different standards of honesty to judge falsehoods we find politically appealing versus unappealing. When judginga falsehood that maligns a favored politician, we ask, "Was it true?" and then condemn it if the answer is no.

In contrast, when judging a falsehood that makes a favored politician look good, we are willing to ask, "Could it have been true?" and then weaken our condemnation if we can imagine the answer is yes. By using a lower ethical standard for lies we like, we leave ourselves vulnerable to influence by pundits andspin doctors.

In this time of "fake news" and "alternative facts," commentators worry that people with different political orientations base their judgments of right and wrong on entirely different perceptions of reality.My research suggests an additional concern: Even when partisans agree on the facts, they can come to

different moral conclusions about the dishonesty of deviating from those facts. The result is more disagreement in an already politically polarized world. Blame the human ability to imagine what might have been.

Daniel A. Effron is assoc*. prof. of organizational behavior at London Business School*

<u>Reading #5:</u> Truth Is, Everyone Lies All the Time"

The Conversation - University of Queensland - May 13, 2012

by Edward Reynolds - PhD Student

Recent research in residential aged care by Anthony Tuckett from the University of Queensland has illustrated that, in some instances, lying is not only necessary, it's actually virtuous. It is a complex ethical tangle, but it illustrates the fact that lies are not ipso facto bad. For all the bad press it gets, lying is one of the most fundamental parts of our social life. Diary studies have illustrated that so called "white lies" form an important part of our social fabric. Similarly, the ethicist Sissela Bok argued that even well-placed serious lies can alleviate, or even prevent, suffering and harm. So why is it that something we regard as innately destructive is such an embedded part of our lives?

Ritual untruth

Harvey Sacks, sociologist and founder of the field of "conversation analysis", argued that "everybody has to lie". In his 1975 paper of the same name he highlighted how greetings have a formal-ritual character to them, and because of this we all lie – on an almost daily basis.

Very simply, as a part of day-to-day introductory greetings Sacks found we have a "how are you" step. This phase of the greeting is an important indicator of our relationship with the other speaker. If the other party is a stranger or acquaintance, "fine" or something similar is the appropriate response.It is as this step, if you are not "fine" that you're supposed to lie. For instance, it's awkward if you tell the supermarket cashier about your recent vasectomy. It's even more awkward if you don't tell your wife.

Sacks' work illustrated that we have responsibilities to give certain categories of people the relevant information. We lie when we have to withhold information in order to manage the relationship.This research on the role of lies in managing our relationships has been replicated across various

cultures, including the Chinese, French and northern Thai cultures and even in members of South American culture Tzeltal. Speakers across these languages manage relationships with the ritual-formal aspects of their languages.

It has been argued that such white lies are universal. But, as claims to even basic universals such as emotions, or expressions are easily challenged it remains to be seen whether this feature of human sociality is a constant. Nevertheless, these are the little white lies that glue our day-to-day relationships together. These are the sorts of untruths that often are not even regarded as lies.

It is of course the more serious lies that we care about. These are typically divided into two categories: lies of "commission" and lies of "omission". Lies of commission are when something is said that does not mirror reality. Lies of omission are those where somebody should have said something but failed to do so.

Commission

Lies of commission are all about manufacturing our own version of events. When we come across a

discrepancy between someone else's version of events and our own experience or understanding of those events we routinely rush to reconcile the two.

The late UCLA sociologist Melvin Pollner called this difference between other's reports and our experiences a part of the "politics of experience". One of the ways to reconcile such a difference is to conclude (and possibly assert) that the other person is lying. If the other (lying) party doesn't back down,then some sort of dispute will likely ensue.

Lies of commission are those in which you proactively manufacture a version of events that differs with what you know to be "true". Mind you, any philosopher will tell you that "truth" is an altogether more complicated issue. In any case it is this sense of agency that marks the difference between commission and omission.

This agency aspect of lies is reflected in peoples' reactions when they find out they've been lied to. Lies themselves are typically responsive moves in interaction (if, albeit, pre-planned responses). People lie when they answer a question or are asked to make a statement. Research has yet to find instances wherepeople simply volunteer that a statement is false (excepting pathological liars and those afflicted with Korsaoff's syndrome). My own research, for instance replicated earlier work which found that lies tend to occur in such "secondpositions" in conversation (answers, denials and so forth). I found no cases in which lies were used proactively.

But this was juxtaposed against the portrayals of liars when found out. Participants in my research painted liars as having *actively* lied, rather than having reactively done so. What's the difference?

Well, Harold Garfinkel, influential sociologist and the founder of "ethnomethodology", demonstrated that we "trust" that people are doing what they appear to be doing. He showed that if people stop trusting another person's actions to be what they appear to be, and instead incessantly question people's motives, social interactions grind to a halt.

As Maarten Derksen from the University of Gronigen argues, lies violate this taken-for- granted nature of interaction. So, what you are "doing" when you lie is subverting the normal assumptions of transparency between motives and action.

Omission

Lies by omission, as police will tell you, are exceedingly difficult to spot. This is because, in conversation, there are any number of possible things you could say. You don't violate the principle of trust when you omit details.

This is precisely how politicians operate. The maxim "how do you know when a politician is lying? It's when they are speaking" refers almost exclusively to lies by omission. Instead, politicians operate on evasion and omission.

This lends defensibility to their position, because proving a lie by omission relies on making the person responsible for answering or responding with particular information and that you have failed to do so. For instance, police often struggle with to obtain information from witnesses in witness interviews but can force the witness to provide information under oath. In effect, the witness has lied by omission in the witness interview.

And if we bring it back to human societies, lies by omission can be seen as a breach of relationships. In our vasectomy example, it would be a lie by omission if you failed to tell your partner, but not a lie by omission if you failed to tell the friendly supermarket cashier. The notion of "lies = bad" and "truth = good" oversimplifies the very functional use of lies in our everyday life.

OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**

CLASS #5 – OUTLIINE (Apr 17)

Part ONE: Emotions & Behaviors

Video 1: "Experts in Emotions: PRIDE & EMBARRASSMENT" (15:03) – June Gruber

Class discussion

Video 2: "Mystery of Music" (10:56) Netflix 'Explained Series'

Video 3: "Former Ballerina with Alzheimer's Performs 'Swan Lake'" (1:40)

Reading 1: "How Music Heals Us, Even When It's Sad" by Leigh Riby

Class discussion

Part TWO: 'HIDDEN BRAIN' Podcasts

Topic – MONEY, GIVING and PSYCHOLOGY of SCARCITY

HB Podcast 1: "How Scarcity Trap Affects Our Thinking, Behavior" (5:41) (Jan 2, 2014) A Harvard economist finds there are psychological connections between the bad financial planning of many poor people and the poor time management of busy professionals. In both cases, he finds the experience of scarcity causesbiases in the mind that exacerbate problems.

HB Podcast 2: "As We Become Richer, Do We Become Stingier?" (5:43) (Sep. 3, 2013) A UCLA researcher says science shows that as people earn more money, they become more individualistic and less community oriented. As a result, they seem to donate less of their time and money, proportionally, than poorer people.

HB Podcast 3: "Research Suggests Generosity Is Hardwired Into Our Brains" (4:36) (Dec. 24, 2014) If generosity makes us happy, and lots of research suggests that it does, why do many of us find it difficult to be generous?

Reading 2: "Scarcity: Why Having Too Little Means So Much" by Mullainathan & Shafir

Reading 3: "The Psychology of Scarcity" by Amy Novotney

Reading 4: "Why Having Too Little Means So Much" by Oliver Berkman

Reading 5: "Is There a Biological Basis for Generosity?" by Alison Escalante MD

Class discussion

Reading #1: *"How Music Heals Us, Even When It's Sad"*

A new study on music therapy

Dept. of Psychology, Northumbria University (UK) Nov. 14, 2023

By Leigh Riby - Professor of Cognitive-Neuroscience

There is a renewed fascination with the healing powers of music. This resurgence can primarily be attributed to recent breakthroughs in neuroscientific research, which have substantiated music's therapeutic properties such as emotional regulation and brain re-engagement. This has led to a growing integration of music therapy with conventional mental health treatments.

Such musical interventions have already been shown to help people with cancer, chronic pain and depression. The debilitating consequences of stress, such as elevated blood pressure and muscle tension, can also be alleviated through the power of music.

As both a longtime music fan and neuroscientist, I believe music has a special status among all the arts in terms of the breadth and depth of its impact on people. One critical aspect is its powers of autobiographical memory retrieval – encouraging often highly personal recollections of past experiences. We can all recount an instance where a tune transports us back in time, rekindling recollections and often imbuing them with a range of powerful emotions.

But enhanced recollection can also occur in dementia patients, for whom the transformative impact of music therapy sometimes opens a floodgate of memories – from cherished childhood experiences and the aromas and tastes of a mother's kitchen to lazy summer afternoons spent with family or the atmosphere and energy of a music festival.

One remarkable example is a widely shared video made by the Asociación Música para Despertar, which is presumed to feature the Spanish-Cuban ballerina Martha González Saldaña. The music of Swan Lake by Tchaikovsky appears to reactivate cherished memories and even motor responses in this former prima ballerina.

In our laboratory at Northumbria University, we aim to harness these recent neuroscience advances to deepen our understanding of the intricate connection between music, the brain and mental wellbeing. We want to answer specific questions such as why sad or bittersweet music plays a unique therapeutic role for some people, and which parts of the brain it "touches" compared with happier compositions.

Everyone's response to music is deeply personal, so our research also necessitates getting our study participants to describe how a particular piece of music makes them feel – including its ability to encourage profound introspection and evoke meaningful memories.

Throughout history, many cultures have embraced the healing powers of music. Ancient Egyptians incorporated music into their religious ceremonies, considering it a therapeutic force. Native American tribes, such as the Navajo, used music and dance in their healing rituals, relying on drumming and chanting to promote physical and spiritual wellbeing. In traditional Chinese medicine, specific musical tones and rhythms were believed to balance the body's energy and enhance health.

The 'Mozart effect'

The starting point of our research was the so-called "Mozart effect" – the suggestion that exposure to intricate musical compositions, especially classical pieces, stimulates brain activity and ultimately enhances cognitive abilities.

We also found indirect effects related to arousal. When people immerse themselves in the music they personally enjoy, they experience a dramatic shift in their alertness and mood. This phenomenon shares similarities with the increased cognitive performance often linked to other enjoyable experiences.

What's going on inside our brain?

Music's emotional and therapeutic qualities are highly related to the release of neurochemicals. A number of these are associated with happiness, including oxytocin, serotonin, and endorphins. However, dopamine is central to the enhancing properties of music.

It triggers the release of dopamine in regions of the brain devoted to reward and pleasure, generating sensations of joy and euphoria akin to the impact of other pleasurable activities such as eating or having sex. But unlike these activities, which have clear value related to survival and reproduction, the evolutionary advantage of music is less obvious.

Its strong social function is acknowledged as the main factor behind music's development and preservation in human communities. So, this protective quality may explain why it taps into the same neural mechanisms as other pleasurable activities.

When we engage with music, whether playing or listening, the nucleus accumbens responds to its pleasurable aspects by triggering the release of dopamine. This process, known as the dopamine reward pathway, is critical for experiencing and reinforcing positive emotions such as the feelings of happiness, joy or excitement that music can bring.

That said, we can see how music's effect on the brain extends beyond mere pleasure. The amygdala, a region of the brain renowned for its involvement in emotion, generates and regulates emotional responses to music, from the heartwarming nostalgia of a familiar melody to the exhilarating excitement of a crescendoing symphony or the spine-tingling fear of an eerie, haunting tune.

Research has also demonstrated that, when stimulated by music, these regions can encourage us to have autobiographical memories that elicit positive self-reflection that makes us feel better – as we saw in the video of former ballerina Martha González Saldaña.

As each person has their own tastes and emotional connections with certain types of music, a personalized approach is essential when designing music therapy interventions, to ensure they resonate with individuals deeply.

Exploring the effects of happy and sad music

Our preliminary data reveals that happy music sparks present and future-oriented thoughts, positive emotions, and an outward focus on others. These thoughts were associated with heightened frontal brain activity and reduced posterior brain activity. In contrast, sad tunes caused self-focused reflection on past events, aligning with increased neural activity in brain areas tied to introspection and memory retrieval.

So why does sad music have the power to impact psychological wellbeing? The immersive experience of somber melodies provides a platform for emotional release and processing. By evoking deep emotions, sad music allows listeners to find solace, introspect, and effectively navigate their emotional states.

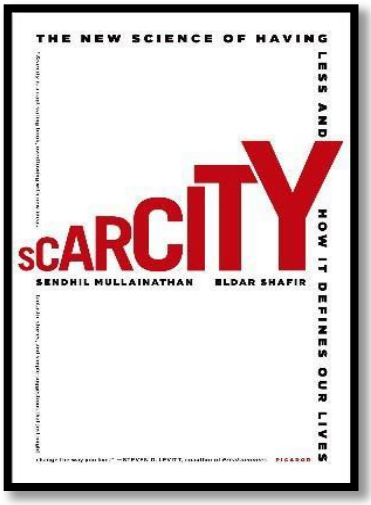
What music therapy can offer in the future

Looking ahead, artificial intelligence (AI) integration holds the potential to revolutionize music therapy. AI can dynamically adapt therapy interventions based on a person's evolving emotional responses. Imagine a therapy session that uses AI to select and adjust music in real-time, precisely tailored to the patient's emotional needs, creating a highly personalized and effective therapeutic experience. These innovations are

poised to reshape the field of music therapy, unlocking its full therapeutic potential.

The sheer pleasure of listening to music, the emotional connection it fosters, and the comfort it provides are qualities that go beyond what can be solely measured by scientific methods. Music deeply influences our basic emotions and experiences, transcending scientific measurement. It speaks to the core of our human experience, offering impacts that cannot easily be defined or document.

Reading #2: *"Scarcity: Why Having Too Little Means So Much"*



Examining Of How Scarcity—And Our Flawed Responses ToIt—Shapes Our Lives, Our Society, And Our Culture

By Sendhil Mullainathan and Eldar Shafir

Scarcity Time Books, Henry Holt & Co. New York (2013)

Why do successful people get things done at the last minute? Why does poverty persist? Why do organizations get stuck firefighting? Why do thelonely find it hard to make friends? These questions seem unconnected, yet Sendhil Mullainathan and Eldar Shafir show that they are all are examples of a mind-set produced by scarcity.

Drawing on cutting-edge research from behavioral science and economics, Mullainathan and Shafir show that scarcity creates a similar psychology for everyone struggling to manage with less than they need. Busy people fail to manage their time efficiently for thesame reasons the poor and those maxed out on credit cards fail to manage their money. The dynamicsof scarcity reveal why dieters find it hard to resist temptation, why students and busy executives mismanage their time, and why sugarcane farmers are smarter after harvest than before. Once we start thinking in terms of scarcity and the strategies it imposes, the problems of modern life come intosharper focus.

Mullainathan and Shafir discuss how scarcity affect our daily lives, recounting anecdotes of their own foibles and making surprising connections that bring this research alive. Their book provides a new way of understanding why the poor stay poor and the busy stay busy, and it reveals not only how scarcity leads us astray but also how individuals and organizations can better manage scarcity for greater satisfaction and success.

Reading #3: *"The Psychology of Scarcity"*

Exploring how deprivation wreaks havoc on cognition and decision-making.

American Psychological Association - Feb. 2014, Vol 45, No 2
By Amy Novotney

Being poor requires so much mental energy that those with limited means — be they sugarcane farmers in India or New Jersey mall-goers — are more likelyto make mistakes and bad decisions than those with bigger financial cushions.

This is the psychology of scarcity, says Princeton University psychology and public affairs professor Eldar Shafir, PhD, who with Harvard University economist Sendhil Mullainathan, PhD, explores how people's minds are less efficient when they feel they lack something — whether it is money, time, calories or even companionship? This scarcity mindset consumes what Shafir calls "mental bandwidth" — brainpower that would otherwise go to less pressing concerns, planning ahead and problem-solving. This deprivation can lead to a life absorbed by preoccupations that impose ongoing cognitive deficits and reinforce self-defeating actions. Shafir and Mullainathan offer insights into how to ease the burden in the 2013 book "Scarcity: Why Having Too Little Means So Much" (Times Books). Shafir spoke to the *Monitor* about his research and the implications it could have for policy development.

How did your interest in scarcity begin?

About eight years ago, Sendhil and I decided to collaborate on the topic of decision-making in the context of poverty because it was a topic no one was exploring. Historically, there have been two ways to think about poverty: Half of the academic discussion claims that poor people are perfectly rational and make perfectly reasonable cost-benefit decisions based on their circumstances. The other half focuses on this culture of poverty that is based on poor values and lack of planning. We felt that there was a third alternative. We don't think anybody is perfectly rational, and there's no reason to think the poor are terribly pathological or unusual in any special way. What if we just think about them as confused and biased, as we all are, and that when you make those mistakes in the context of poverty, the consequences are much more severe than when you have more comfort. Over time, we started getting more data and observing cases where the poor seemed to be making more extreme errors than those with greater means. That gradually led us to the idea that there's a very particular psychology that emerges when we don't have enough, and that this psychology leads tovery bad outcomes.

How does scarcity lead to these bad outcomes?

Every psychologist understands that we have very limited cognitive space and bandwidth. When you focus heavily on one thing, there is just less mind to devote to other things. We call it tunneling — as you devote more and more to dealing with scarcity you have less and less for other things in your life, some of which are very important for dealing with scarcity. There's a lot of literature showing that poor people don't do as well in many areas of their lives. They are often less attentive parents than those who have more money, they're worse at adhering to their medication than the rich, and even poor farmers weed their fields less well than those who are less poor.

Tell me about the research that led you to these conclusions.

We started with a series of observations with fruit and flower vendors in a giant market outside Chennai, India. No one can call these women lazy or myopic — they work extremely hard and plan

their days very carefully, spending from early morning until evening buying flowers or mangoes for 1,000 rupees, selling them for 1,100 rupees and then giving back to the supplier 1,050 rupees. Then they get up the next morning and take on this incredibly high interest loan again, every day for an average of about 10 years, and if they saved just a little more or borrowed a little less they would soon be debt-free and could double their income. It seemed to have a logic of its own — this need to focus on the day to day and not having the capacity to adjust over the long run.

We then completed a battery of studies where we saw that manipulating scarcity has an enormous impact on people's cognitive capacity. First, together with Jiaying Zhao, who was then a graduate student, we went to a mall in New Jersey where we asked people to complete tests measuring cognitive control and fluid intelligence, a component of IQ. We had them do these things while they were contemplating a financial scenario — something that's manageable, requiring $150 to fix a car that broke down, or more demanding, requiring $1,500 in car-related expenses. We divided the participants by household income and found that the rich people in the mall did equally well on the cognitive tests, whether they were thinking of the challenging or the less challenging scenario related to the car. The poorer people in the mall were equally capable cognitively and did just as well on fluid intelligence as the rich when they were thinking about the manageable scenario. But once they contemplated the more challenging scenario, their scores went way down. Simply being preoccupied with this demanding financial challenge makes them perform worse.

Obviously, in that experiment, we controlled for everything we could, but at the end of the day, these are rich vs. poor and you could say that they differ in things like health and education. So then we went to India and studied sugar cane farmers, who earn the bulk of their income once a year after they harvest, and then have to make sure their funds keep them going until the following harvest. These are people who are basically rich after the harvest but poor before, so we conducted these cognitive tests on the same farmers, two months before and two months after harvest. It's the same person, same education and values, but they, too, scored the equivalent of 10 IQ points less before harvest compared to after harvest.

What effect do these cognitive shifts have on behavior & decision-making?

One of the classic errors that poor Americans are criticized for is taking "payday loans," those very high-interest loans that at the moment seem like a good solution but two weeks later cause them to owe high interest. So, we decided to run a study with Princeton undergraduates, who nobody would say are unsophisticated. Working with Anuj Shah, we had them play a "Family Feud"-like computer game and randomly assigned them to be rich or poor in the amount of time they had to answer questions, giving the rich 50 seconds per round and the poor 15 seconds. Half of the participants were also given the option to borrow time, but every second they borrowed cost two seconds from the entire bucket of time they had available for the game. We found that when people were rich with time they were very judicious, needed it less, and only very occasionally took a loan. But when they were time-poor, these sophisticated Princeton students grabbed these available loans to try and do well in the game and ended up making less money than the time-poor students who weren't given the option to borrow. These students made the same mistakes that we observed among poor people.

What surprises you most about scarcity?

What's most striking is that these findings make a very strong case for the idea that people who look very bad in conditions of scarcity are just as capable as the rest of us when scarcity does not impose itself on their minds. What's interesting about a lot of behavioral research is that we don't have full intuitive access to it. For example, research on the use of cellphones in cars has been striking because we all have the illusion that we can manage calls just fine. But the findings are clear that when you are on a cellphone in the car, even when it's not handheld, your reaction time is comparable to being legally drunk. That's not intuitively available to us because most of us just don't feel it. The same thing happens

here. People know they're busy and distracted, but the impact and the consequences of that distraction are much more impressive than we realize.

What effect is scarcity having on America?

There's a very large proportion of Americans who are concerned and struggling financially and therefore possibly lacking in bandwidth. Each time new issues raise their ugly heads, we lose cognitive abilities elsewhere. These findings may even suggest that after the 2008 financial crisis, America may have lost a lot of fluid intelligence. People are walking around so concerned with one element of their lives that they don't have room for things on the periphery.

Are there any solutions?

To the extent that you can afford to, give yourself some slack. When you pack your life too tightly and don't leave slack, the slightest unexpected event leaves you stuck. You don't know what will happen but inevitably something will — a water pipe will break, the car will break down, you'll get a parking ticket — or if you're busy and packed your time too tightly, you may get an unexpected phone call or hit a traffic jam on the way to a meeting. How do you create slack? When you're dealing with a scarcity of time, plan a few moments of slack throughout the day — a half-hour here or there intentionally left open so that if anything comes up you can avail yourself of that unaccounted-for time and take care of the thing you hadn't anticipated. I call it having a meeting with yourself. When you're poor, of course, that's not easy. But building savings for a rainy day can help you deal with an unexpected bounced check or parking ticket, giving you somewhere to draw from so that life can continue. We also have lots of ideas about how to "scarcity-proof" the world when it comes to arranging policies for the poor. We wouldn't charge people $200 or $300 to join a benefits program such as food stamps, because the wholepoint is they have no money. But when you give them a very complicated form or demand that they be somewhere exactly on time three days in a row, you're imposing a massive bandwidth tax. Instead of taxing them money, you're taxing them bandwidth, which is also something they don't have enough of. So, you are creating a situation where they're bound to fail. We propose that policymakers do all that they can to make the world a place where when I fail for a moment because of mismanaging my scarcity,there is a way to climb out, rather than sink further.

What would you most like other psychologists to take away from your work?

With the White House realizing the importance of behavioral research, now is the time for psychologists to really get involved in informing and influencing policy. When I was appointed to be on the President's Advisory Council on Financial Capability in 2012, it was very much a consequence of this work. That was a rare case where you can really bring some of psychology's fundamental insights about limited cognition, limited attention and behavior that's driven by biases and mistakes to a forum where people typically don't think that way. Behavioral researchers are having an impact — it's happening slowly, but more than ever before, and the interest continues to grow.

Reading #4: *"Why Having Too Little Means So Much"*

Does being poor lead to bad choices?

The Guardian – Aug. 23, 2013
By Oliver Berkeman

Behind every coalition promise to "get tough on single mothers", behind every Daily Mail story about Britain's "handout culture", or Mitt Romney's notorious comments about "the 47%", there lies an assumption: that being poor is a failureof character. Awkwardly, for those who find this obnoxious, the research sometimes makes it seem true. People who are less well-off really do appear to give in more readily to temptation, making the very purchases they can't afford; to make unwise financial decisions; to use less effective parenting techniques; or to fail to take life-saving drugs, even when they're free. Is this a deep-seated weakness of will, made worse by a "culture of dependency"? The Harvard economist Sendhil Mullainathan and the Princetonpsychologist Eldar Shafir reject that idea, and some of the most familiar leftwing responses, too.
Poverty, they argue, is indeed a matter of willpower and bad decisions, but the Mail has it back-to-front. It's not that foolish choices make you poor; it's that poverty's effects on the mind lead to bad choices. Living with too little imposes huge psychic costs, reducing our mental bandwidth and distorting our decision-making in ways that dig us deeper into a bad situation.

Of course, it's hardly news that poverty creates a vicious cycle. Not having money is expensive, thanks to credit card late fees, high interest rates on payday loans, the extra cost of buying in instalments, and so on. But the alarming conclusion of this book is how completely scarcity colonizes the mind. Merely asking poorer people to contemplate a hypothetical £1,000 car repair, one study by the authors shows, impairs their performance on intelligence tests as much as missing a night's sleep – about 13 or 14 IQ points. In another study, Indian sugar cane farmers performed worse pre-harvest, when money was tight, compared to post-harvest. "Scarcity captures the mind," explain Mullainathan and Shafir. It promotes tunnel vision, helping us focus on the crisis at hand but making us "less insightful, less forward-thinking, less controlled". Wise long-term decisions and willpower require cognitive resources.Poverty leaves far less of those resources at our disposal.

Their most arresting claim is that the same effects kick in – albeit not always with such grave implications – in any conditions of scarcity, not just lack of money. Chronically busy people, suffering from a scarcity of time, also demonstrate impaired abilities and make self- defeating choices, such as unproductive multi-tasking or neglecting family for work. Lonely people, suffering from a scarcity of social contact, become hyper-focused on their loneliness, prompting behaviors that render it worse. In one sense, Mullainathan and Shafir concede, scarcity is so ubiquitous as to be almost meaningless. But the *feeling* of scarcity – of not having as much of something as you believe you need – is something more specific and agonizing. To use the authors' favorite metaphor, life under such conditions is like packing a tiny suitcase for a trip. It entails a ceaseless focus on difficult trade-offs: the umbrella or the extra sweater?

The greatest freedom that money can buy is the freedom from thinking about money – or, to quote Henry David Thoreau, "a man is rich in proportion to the number of things he can afford to let alone".

There's a risk here of lapsing into the obvious: rich and relaxed is better than poor and time-starved. Mallainathan and Shafir do sometimes succumb; financial abundance, we are gravely informed, "allows us to buy more things". Yet the strongest chapters demonstrate that the psychological effects of scarcity aren't obvious at all. In certain limited ways, for example, poverty actually confers cognitive benefits. Some of the classic findings about how irrational we are when it comes to money – such as our

willingness to travel across town to save £5 on a cheap toaster, but not on a flatscreen TV – apply much less to the poor.

Dieters, experiencing a scarcity of food, are significantly better than others at identifying words briefly flashed on a screen, provided that they're about food. Lonely people read facial expressions more accurately. And time-scarcity brings motivational benefits, as any journalist on a deadline could tell you.

But these positive effects of tunnel vision are outweighed by what the authors call "the bandwidth tax", the ways scarcity limits or distorts our skills. This tax, they argue persuasively, explains a number of otherwise confounding kinds of self-defeating behaviour among those suffering scarcity – from the failure of poorer farmers in Africa to weed their fields, even though they have the time to do so and would make more money that way, to the failure of low-income Americans to take diabetes drugs and other medications, or to eat more healthily even when it's financially viable. "The failures of the poor are part and parcel of the misfortune of being poor in the first place," they write. It's not that poor people have less bandwidth. It's that "all people, if they were poor, would have less effective bandwidth".

The bandwidth argument threatens to undermine much received political wisdom on poverty. Get-tough policies, like cutting off access to benefits after a fixed number of years, won't motivate people to find jobs: a deadline of several years is too distant to feature in the calculations of people only concerned with paying the next bill. On the other hand, well-intended interventions like providing

financial education or job-readiness training could backfire, too. Another class to attend, another item to tick off the to-do list – all use up more bandwidth, potentially impairing people's capacities more than improving them.

How can we stop falling into these traps? Mullainathan and Shafir offer a few "nudge"-style suggestions. Where possible, systems should be designed so that inattentiveness leads to better outcomes, for example by making savings schemes opt-out, not opt-in. Beneficial behaviors could be "brought inside the tunnel": the authors describe their own experiments with an "impulse savings" scheme, involving cards sold at supermarket tills, resembling gift vouchers, but which credit the purchaser's savings account instead. And behaviors that require constant, energy-depleting vigilance (like trying to resist non-essential spending) should be replaced by one-off actions (like automatically transferring a percentage of your wages to a savings account). But they wisely don't pretend to offer a comprehensive solution. The tendrils of scarcity reach too deep into the mind. Poor people need more money, not self-help tricks.

The overall result is a rather odd but ultimately humane and very welcome book. Presenting itself as yet another "big idea" tome that will reveal the unexpected force that explains the world, *Scarcity* ends up reaffirming one of the oldest truths: that what really

explains the world is its division into haves and have-nots. The clear message to those with resources – money, time, or anything else – is to resist the urge to judge those without them. If you faced the same scarcity, Mullainathan and Shafir demonstrate, you'd make the same mistakes. Indeed, in some area of your life – if not your spending, then your work/life balance or your diet – you're almost certainly already doing so.

<u>Reading #5</u>*: "Is There A Biological Basis For Generosity?"*

Generosity may be as essential to health as diet, exercise, and sleep.

PSYCHOLOGY TODAY
By Alison Escalante, MD

Lately I've been asking myself, "How can I teach my kids to be generous?" I started to consider practical steps, and then realized I had forgotten a more important question. The first question I need to ask as a parent is about me, "How can you be generous to others?"

Questioning my own behavior is crucial because it helps avoid two common mistakes parents make. First,acting like this is a skill they need to learn but doesn't apply to me. It doesn't help at all if I act selfishly toward others and then preach at them about giving freely. Second, acting like generosity is related to oneconcrete thing, like charity, and ignoring that generosity is a lifestyle.

What is generosity anyway? Why does it matter to kids?

Notre Dame's Science of Generosity Project defines generosity as "giving good things to others freely and abundantly." Someone like that sounds like a nice person, and I would love for my kids to grow up to be nice people. But how does generosity affect happiness? Generosity is associated with better mental health, and it is linked to happiness. "And even small acts of kindness, like picking up something someone else has dropped, make people feel happy," (Allen, 2018.) Being generous makes us happy.
When we think of generosity, most often we think of spending money on others, but that's only part of it. Becoming a generous person involves being helpers, sharing our time, paying attention to people and encouraging them, even being emotionally available. Do you see what's happening with this list?

Remember that the most powerful way children learn from parents is by modeling. That means they dowhat we do, not what we say.

And of course, parenting also plays a role in cultivating generosity. Some studies have found that various parenting practices—particularly role-modeling and discussing generosity—may help children grow up to be more generous adults.

How can you be generous to others?

How do I teach my child to be generous? First, I must ask myself, "How can you be generous to others? How can you be generous in your interactions with your family? How can you be generous in the way youinteract with nonfamily members in front of your family?"

It's a great idea to discuss generosity at a family meeting and make your values as a family explicit. Askyour child "How does giving make you feel?" Don't be afraid to acknowledge all the feelings your child may name. Perhaps they might say, "I like sharing, but I don't like it all the time. Sometimes I want my stuff and sharing it makes me feel bad." This is a great time to ask them, "Why is giving good for us?" Explain what it does for happiness for themselves and everyone around them. Explain why your familyvalues it. Then strategize steps they can take to be generous.

A conversation about generosity is a fantastic opportunity to talk about boundaries. “Share” is the first command word kids learn in their lives that has to do with generosity. They hear it constantly in daycare or preschool. All too often it is presented as a requirement. When I talk with kids about this, they usually express sharing as a black and white rule. They get the message that if someone wants what they have, they need to give it to them. The message is “what’s yours is mine.” Yikes!

Without understanding ownership and personal rights, there is no true sharing or generosity. If a child is taught to share automatically without any consideration of their own feelings, they are being taught to be taken advantage of.

True generosity means that I give of what is mine, by my own choice. And that is where the joy and the character building come from. So, first, I must understand what mine is and what is yours.

Try this idea: when our were young, we made a rule in our house that when our kids get something new, they are not required to share it the first day. Then, we encourage sharing, but it must go both ways. When they were little there was often fighting over toys. If they could not sort out a sharing agreement, we would set a timer and take turns with the item in question. Now that they are elementary school aged, they tend to negotiate well with each other (most of the time).

Why is generosity good for you?

So often, what we teach our kids has to do with our view of the world and our view of what it means to be human. Many of us were taught that humans are selfish by nature. We were taught this as a fundamental principle of capitalism. We were taught this as a principle of evolution when we were told selfishness was the say to ensure survival of the fittest. The strongest took the good stuff and survived, and the suckers died.

However, the science of evolutionary sociology has called much of this into question. In fact, pro-social behavior has been shown to have survival value, because groups survive together. It even gives people an advantage with mating, making them more attractive to potential partners. Today, generosity is linked to benefits in the workplace and more contentment in romantic relationships. People who practice generosity live longerand enjoy better physical and mental health.

Generosity goes both ways, from adults to children and children to adults. It turns out that in societies that are not technologically advanced, the generosity of the children was essential to the survival of the community. When children carry water, help prepare food, or care for and teach the other children, the whole community survives more.

“This is not to suggest that generosity is more “natural” than selfish-ness; rather, evidence suggests that humans have both selfish and generous propensities. In other words, generosity is not simply a cultural construct. While our selfish instincts may get more attention, numerous studies have shown that our instincts for generosity also have deep evolutionary roots.”

Is there a biological basis for generosity?

Many animals have been found to be cooperative or even downright generous at times, including monkeys, chimpanzees, army ants, bees, fish, certain birds and vampire bats. Yes! Vampire bats will share blood with other bats who are not related to them, thus preventing starvation.

Biologically, the brain shows stimulation in the reward circuits (the mesolimbic area) when we act generously. It feels good to be generous, even when we are forced to do it, which is important for parents to know. I can indeed force my kids to participate in generous behaviors as part of their training, and this will feel good to them. Then, when they do it themselves, it will feel even better. (Remember to respect their boundaries.)

The orbitofrontal cortex of the brain is also triggered when we behave generously. This area of the brain activates for rewards, but also may have a part in how we assess the decision we just made. One study even suggested that this area may reward us when we do things that are fair, even when it goes against

our own interests. We seem to be set up to understand what is fair for the group and seethat as good for us personally.

Children are wired for generosity.

Research has demonstrated that generosity and helping behavioris spontaneous in children as young as 14 months and can be demonstrated throughout their development. Small encouragement from parents helps them develop this even more.If vampire bats can be generous, I can raise my kids to be generous. Our kids are born with wiring that predisposes them togenerosity, but our parenting has an impact. In this case, not only in our behavioral modeling, but also in the safety and comfort ourkids find in their relationship with us. Researchers at The University of Kansas believe that the more secure you are in your attachment to others, the moregenerous you will be.

We try to so hard to bring happiness to our children, and we love to do it with treats. We delight in givingour children gifts, fun activities and yummy treats. But maybe an even better way to make our children happy is to teach them to give.

I thought generosity was a good idea because it was part of being a good person. Yet, generosity has been tied to better physical health, longer life, improved mental health and greater happiness. Maybe this pediatrician should add generosity to the fundamentals we discuss at checkups: sleep, good diet, exercise, and generosity.

OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**

CLASS #6 - OUTLINE (Apr 24)

Part ONE: Emotions & Behaviors

Video 1: "Experts in Emotions: "SHAME & GUILT" (Edited: 13:09) - June Gruber

Class discussion

Reading #1: "Relationship Between Personality and Emotions" by Mukesh Kamar

Reading #2: "Relationship Between Culture and Emotions" by Mukesh Kamar

Reading #3: "How Emotions Shape Character" by RH Gardner

Part TWO: HIDDEN BRAIN Podcasts
Topic – REGRET and NOSTALGIA

HB Podcast 1-a: REGRET: "Look Back: Reflecting on the Past to Understand the Present" (Edited: 15:07) Everyone has regrets. You probably have a few of them. By some estimates, regret is the most common negative emotion that we talk about, and the second-most common emotion mentioned in our daily lives. We wish we could go back and change our actions to have been kinder on our friends and families'.

Class discussion

Video 2: "Views on Nostalgia" (4:31)

HB Podcast 1-b: NOSTALGIA: "The key element of nostalgia isn't about us retreating to the past. It's about us pulling the past forward to the present, and using it to mobilize us, to energize us, to take on new challengesand opportunities." (Edited: 15:10.) Psychology professor Clay Routledge studies nostalgia, that gentle tug oflonging you feel when you hear a favorite song from your high school days, or even recall moments of hardship and loss. (Original; 50:08 - Jun 14, 2018)

Class discussion

Reading 4: "Six Steps to Turn Regret Into Self-Improvement" By Jennifer Taitz

Reading 5: "What Is Nostalgia Good For?" By John Tierney

Class discussion

<u>Reading #1:</u> *"Relationship Between Personality and Emotions"*

Study.com – Dec. 18, 2023
By Mukesh Kumar, PhD.

We often attribute a person's behavior to emotions and even say that a person has an emotional personality. These constructs are linked not only in our daily conversations while sitting at a coffee table but also in the field of academics. Not only does personality affect emotions, but it is also affected by emotions. It is important to understand how psychologists understand these constructs to map the subtle connection between emotions and personality.

What is Personality?

In simple terms, personality refers to underlying behavioral, thinking, and feeling patterns characteristic of a person shaped by an intricate interplay of nature and nurture. On the other hand, emotions are patterns of experiential, behavioral, and physiological reactions to specific events. The relationship between emotions and personality is direct and indirect, Different aspects of this interesting relationship have been discussed in the upcoming sections.

Emotion as a Part of Personality

The personality definition, as earlier stated, clearly specifies feelings as a part of the personality, implying that different personalities have different ways of emotionally reacting to situations, both intrinsic and extrinsic. Every personality type or trait has an emotional reaction pattern characteristic of it, and we can understand it in great detail by looking at the basic theories of personality and the emotional components attached to it.

Trait Theories

These theories define a trait as a distinctive way of behaving across situations with a huge hereditary component. The "Big Five Traits" theory holds that all five traits have an emotional component and is one of the most popular trait theories. These can be understood as follows –

- **Introversion-Extraversion** – The extraversion-introversion dimension, for example, implies that people are extroverts and manifest their emotions by their orientation towards others, while introverts' emotions are orientated towards themselves. For example, when an introverted person is sad, she will avoid going out and having "me time," while an extrovert is likelier to go out, talk with people, have a party, etc.
- **Openness to experiences** – Those who are open to experiences are more likely to manifest positive and constructive emotions in new, challenging, unusual situations, whereas those with less openness will be more consistent and less curious and, therefore, more likely to show negative emotions in the same situations. For example, an open person may show pleasure in being intellectually challenged, while a less open person may feel threatened.
- **Conscientiousness** – Conscientious people tend to be organized, efficient, and disciplined. These people are likely to feel negative emotions when in unpredictable and unorganized situations,

whereas those standing on the other end of this continuum may not feel such intense emotions in such situations.

- **Agreeableness** – It reflects one's tendency to be more friendly, composite, and socially right instead of rational and critical. Agreeable people are likely to find positive emotions in social harmony and actions like helping others, while less agreeable people may not be affected by the same.
- **Neuroticism** – This trait is of special interest in the context of emotions as it indicates one's affective tendency, implying whether the person is more prone to experience negative emotions or not. It also indicates one's emotional stability. People who are neurotic are more likely to experience negative emotions in less difficult situations than those who are not.

Behavior Theories

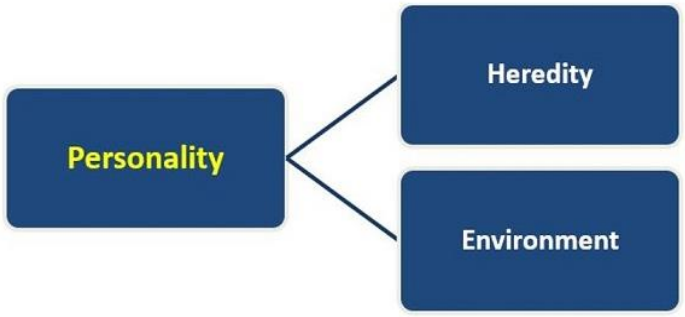
These theories suggest that personality results from learned behavioral reactions to stimuli. It is based on response-stimulus and reinforcement psychology. For example, a girl learns to show fear reactions like shouting and excessive sweating when she sees a lizard. This fear reaction becomes a part of her personality and an enduring pattern of behavior in response to stimuli like a lizard.

Psychoanalytic Theory

This theory was originally proposed by Freud suggests that personality comprises the id, ego, and superego. The interplay of these three forces of unconsciousness determines an individual's behavior, thinking, and feelings. For example, a person with a high superego will feel intense emotions towards what he considers right and will feel pleased when he does righteous things, whereas he will be guilt-ridden when he does something wrong.

Humanistic Theories

These theories are based on the assumption that humans are naturally good and tend to achieve their full potential.



How does personality affect different components of emotions?

Emotions have three components, i.e., physiological, subjective, and expressive. All these components are more or less affected by personality. The subjective component, for example, implies the subjective appraisal of a situation and perceptions of a situation. As we see in different personality and learning theories, this perception is affected by a person's previous experiences and characteristic patterns of thinking, i.e., personality. Interestingly, the expressive component of emotions, i. e., behavior, is also affected by personality. This also occurs in personality theories. The extraversion-introversion trait can be a very good example of it. An extrovert will show a different behavioral reaction to a similar emotion than an introvert. Furthermore, some may get more physiologically intense reactions as compared to others.

Can Emotions Influence Personality?

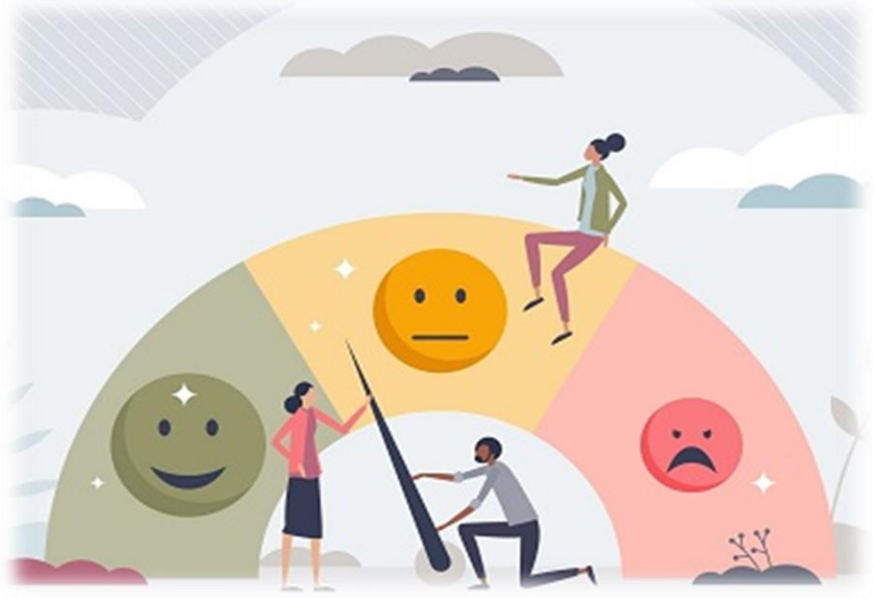
There exists a popular consensus that personality is an interplay of nature and nurture. So the role of emotions in personality comes within the component of nurture. Emotions start affecting personality from childhood. For example, if a child experiences positive emotions and gets parental attachment, she will likely develop an adjusted personality. Further, components of personality also develop out of an individual's frequent emotional reactions and experiences.

Conclusion

Emotions and personality are both significant parts of how one views the world, and they are both affected and get affected by each other, making this whole interplay between emotions and personality a very interesting relationship to study.

<u>Reading #2:</u> *"Relationship Between Culture and Emotions"*

Study.com – Dec. 18, 2023
By Mukesh Kumar, PhD.



Note: In our course readings Anthonio Damasio demonstrates that his theories are pure* Universalist *(see Class 2). By contrast, Lisa Barret Feldman is a truly committed* Social Constructionist *(see Class 6)

The essence of human beings is to feel; that differentiates us from non-living creatures. However, a man in India going through an interview or saving a dying friend will feel different emotions to an American man. Why is that so?

Cultural Perspectives on the Psychology of Emotions

Social researchers generally fell into either of two camps, mostly in the 1950s and 1960s. According to the universalist camp, notwithstanding differences in national conventions and traditions, all people share similar basic emotions. These **Universalists** held that since emotions developed in reaction to the surroundings that our ancestors encountered in the beginning, they are universal and exist in all societies. People frequently use terms like "organic," "naturally," "biological," and "intuitive" to characterize their emotions, which lends credence to the idea that emotions are innate and shared by all people. Conversely, the **Social Constructivist** school of thought asserted that despite sharing a common evolutionary past, various human societies had independently evolved to suit their unique contexts.

The enormous variety of human settings also means that emotions vary among cultures. Dr. Lutz, for illustration, claimed that many Western theories of emotion include the assumption that they are "unique experiences located within individuals." However, inhabitants of the small island of Ifaluk, which is close to Micronesia, see emotions as "transactions between individuals." Social constructivists say that people are frequently ignorant of how their cultural beliefs are influenced by their culture since cultural concepts and practices are pervasive. Emotions appear spontaneous, organic, biological, and innate while still predominantly molded by culture.

One of the earliest scientific inquiries into the universalist-social constructivist controversy was carried out in the 1970s by Paul Ekman. He created the Face Action Coding System and Wallace Friesen to track people's facial muscular configurations linked to various emotions, including joy, rage, melancholy, terror, and contempt. Ekman and Friesen then took photographs of individuals posing with various emotions. Ekman and Friesen enlisted the aid of colleagues from various universities around the globe to show these pictures to people from wildly different cultural backgrounds, give them a catalog of sentiment words that had been translated into the appropriate languages.

Similarities and Differences Between Asian and American Emotional Expression

According to scholars, the prevalent paradigm of the self in North American settings is an autonomous concept. Being a person entails standing out from others and acting appropriately. However, the prevailing image of the self is interrelated in East Asian cultures, where being a person entails being substantially linked to others and receptive to situational needs. For instance, in a well

American	Asian
• Self is autonomous, so have to stand out • Express emotions selfishly • Don't think about how own emotions will affect others when expressed	• Self substantially linked to everyone • Conceal emotions to safeguard others • Show happier emotions more frequently than others

Physiological Responses to Emotional Events

Studies of emotional response frequently concentrate on three elements: physiology (such as how quickly one's cardiac cycles), individual opinion (such as acute happiness or sadness), and expressive facial behavior (e.g., smiling or frowning).

Emotional Expression

If expressing oneself is the normative standard in North American situations, then concealing emotions (not expressing how one experiences) should have adverse effects. The essential premise of hydraulic conceptions of emotion is that psychological function is impaired by emotional repression and suppression.

Conclusion

Since emotions appear and realize so instinctive to us, it is not easy to comprehend that the manner we encounter them and the bits we crave are not simply genetically coded into us. However, there are several instances where culture, both knowingly and unconsciously, impacts people's emotional life, as the current study has demonstrated (and as continued studies will thoroughly investigate).

<u>Reading #3:</u> *"HOW EMOTIONS SHAPE CHARACTER"*

Managing self through emotional control.

Study.com - Dec

By RH Gardner, Ph.D.

Emotions are the lifeblood of characters. Without emotional characters, you are just writing events, but you're not drawing your audience into your story or life being. There is no life living without emotions. There is no heart in any type of art without emotions. Famous plays, films, novels, and poetry always evoke emotional reactions from viewers and readers. The word emotion derives from the Latin *emovere*, which translates as: to excite, to move, to stir or to agitate.

Emotions and Character

Character refers to the set of qualities, values, and traits that define a person's personality. Character is a reflection of an individual's behavior, beliefs, and moral principles. Emotions are one of the fundamental factors that influence our character. Emotions can be positive, such as joy, love, and gratitude, or negative,

such as anger, fear, and sadness. These emotions impact our character in various ways.

Positive Emotions

Positive emotions such as joy, love, and gratitude have a significant impact on our character. When we experience positive emotions, we tend to exhibit positive behavior, such as kindness, generosity, and compassion. Positive emotions increase our self-esteem and self-worth, leading to a more positive self-image. This, in turn, enhances our character and promotes positive behavior towards others.

Negative Emotions

Negative emotions such as anger, fear, and sadness can also have a significant impact on our character. They can lead to negative behavior, such as aggression, withdrawal, and avoidance. These negative behaviors can harm our relationships and affect our personality development negatively. Prolonged negative emotions can also lead to mental health issues such as anxiety and depression,

Emotions and Personality Development

Positive emotions and experiences during childhood can lead to a more positive personality development, while negative experiences can lead to negative personality traits.

Emotional Intelligence (EI)

Emotional intelligence refers to the ability to recognize, understand, and manage our emotions effectively. EI plays a vital role in shaping our character and personality development. Individuals with high emotional intelligence are better at managing stress and handling challenging situations, leading to a more positive outlook on life.

Emotions such as empathy, guilt, and shame play a significant role in shaping our moral values and principles. These emotions influence our behavior towards others, and our actions reflect our moral character.

Conclusion

Emotions play a vital role in shaping our character, personality development, and moral principles. Emotional intelligence plays a critical role in managing our emotions effectively and shaping our character positively. By recognizing and managing our emotions effectively, we can develop a more positive character and lead a more fulfilling life.

<u>Reading #4:</u> *"Six Steps to Turn Regret Into Self-Improvement"*

Stop beating yourself up and turn your emotions into action.

NY TIMES – Smarter Living -Feb 7,'19
By Jennifer Taitz

Have you ever felt like life would be *better* if you had taken a different path? If only you had pursued that job, ended that relationship sooner or moved to a new city, everything would be just perfect.

Nonsense, of course. But it's human nature to linger on those feelings of regret. We tend to look back and think that missed opportunities — real orimagined — could have set us on a different, possibly more rewarding path. Left unchecked, these emotions can become overwhelming sources of

stress and anxiety.

But even painful emotions like regret can be powerful sources of inspiration. Whether you carry minor regrets that speak to your perfectionism, or you continuously cringe over more serious, "If only I …" thoughts, it's possible to use regret as a lever to help you move ahead, rather than letting it weigh you down.

And there are good reasons for doing so. Researchers have found that obsessing over regrets has a negative impact on mood and sleep, can increase impulsivity, and can be a risk factor for binge eating and misusing alcohol.

As a clinical psychologist, one of my most important tasks in helping people lead healthy, happy and meaningful lives is to teach them evidence-based strategies to manage their emotions. That includes how to use regrets to motivate them. I've found that even when people feel stuck in endless *what if*s, it's possible to recalibrate. Here's how.

Step 1: Evaluate how you cope with regret

Many of us try to push pain away. Others ruminate about perceived mistakes. But whether you ignore or fixate on what's troubling you, research has shown that it's impossible to run from emotions without consequences. And in a vicious twist, dodging upsetting feelings actually makes them even more present: Suppressing our emotions can diminish our capacity for joy and potentially manifest as physical pain.

So instead of trying to ignore your regrets, it's a better idea to practice acknowledging the experience. Try this: Start by slowing down and noticing your thoughts and sensations. Relax your face and hands and think about accepting how you feel now without worrying you'll feel this way forever. Reaching this middle ground between avoiding and dwelling will prove less depressing.

This is easier said than done, but consider the alternative: A 2014 study published in The Journal of General Psychology found that drowning in regret can compromise our ability to make wise decisions, and focusing on those negative emotions "undermined performance" on simple tasks.

However, researchers also found that when people find a *silver lining* in their regret, they are able to think more clearly. "Regret can be a problem, but one benefit of regret is that it signals improvement is possible," said Neal Roese, a professor of marketing at the Kellogg School of Management at Northwestern University who focuses on the psychology of judgment and decision-making. "The trick is to avoid obsessing and pull out a lesson that can be applied in future situations."

Further, when we find ourselves consumed by self-criticism, it can feel tempting to focus on quick fixes, like distracting ourselves, rather than taking steps to improve. And regrets that arise from inaction — i.e., missing opportunities — are particularly frustrating.

Take time to notice how you handled a recent regret. Did you pretend it meant less than it did? Or did youfall into a shame spiral? Once you figure out how you navigate these situations, you can start using your emotions to your advantage.

Step 2: Interrupt your obsessing

Once you've identified how you cope, it's important to learn how to stop a regret spiral from happening, since thinking endlessly about it all but guarantees you'll feel worse.

Take a moment to list the consequences of a recent regret spiral — like circling for hours over a mistake you made — and keep those notes for review. Did you feel better? Worse? Were there concrete lessons you learned? Or did you just feel bad? The point of this list is to realize that these spirals probably won't lead you anywhere productive and, most likely, will leave you feeling stuck.

Next, think about the times you're most tempted to ruminate on your regrets, like right before you go to sleep. Having this list handy will help you keep in mind that it's wasted energy to focus on your regrets.

Finally, develop a set of concrete, alternative options that will engage you when you can feel yourselfstanding on the edge of a regret spiral about to fall in. The goal here is stop this type of thinking in its tracks before it consumes your energy. (Ideally, these choicesdon't involve venting or scrolling through Instagram, both of which can keep regret churning.)

One activity I have my patients try is to list their favorite authors in alphabetical order. When your mind is focused on a project, it's less likely to get derailed. Another idea: If you feel the grip of strong emotions, dip your face in ice water. (Really.)

"People become believers in this strategy once they get past the idea of plunging forward into a bowl of ice-water," said Dr. Kathryn Korslund, an expert in Dialectical Behavior Therapy, a treatment that teaches people how to manage emotions. She said that dipping your face in ice water works because it increases activity in the parasympathetic nervous system, lowering your body temperature and heart rate, preventing emotions from intensifying.

If that seems too jarring, pop an ice cube in your mouth and focus on the sensations. You'll find that it's difficult to simultaneously replay your life's mistakes while fully participating in doing something else. Keep in mind: These activities aren't meant to be a permanent solution. The goal is to regulate your emotions for a few minutes to then approach your situation with a little more clarity.

Step 3: Revisit your regret, then repeat these phrases

Remember that *silver lining* effect? This is how it works. In the same study that found regret hinders our ability to solve problems, participants were asked to readthe following two statements and recall at least one benefit from a regrettable event:

- *Everything can be viewed from a different perspective.*
- *There is positive value in every experience.*

Afterward, participants showed "improved subsequent performance" on the same set of tasks they completed before finding the silver lining.

In other words, focusing on what you gained can help you pivot from the negative impacts of regret. And keep in mind that so much of your regret story is just that: a story. Researchers even label regretful "if only" stories as counterfactual thinking, since it's impossible to know how things would have turned out had you made a different choice.

Step 4: Treat yourself like your ideal mentor would

Researchers at University of California, Berkeley, asked 400 students to write about their biggest regrets and found that self-compassion, not beating ourselves up, "spurs positive adjustment in the faceof regrets." This "self-compassion led to greater personal improvement, in part, through heightened acceptance," theresearchers wrote, adding that "forgiveness stems from situating one's shortcomings or failures — such as a regret experience — as a part of the common human experience."

Imagine your mentor talking you down from a spell of regret. Would she focus on everything you did wrong? Or would she encourage you not to be so mean to yourself, and rather try to find the tangible, practical lessons you can learn from the experience? When all else fails: Just talk to yourself like you'd talk to a friend.

Step 5: Clarify what matters to you

When you feel profound regret — the type that makes you wonder about your place in life, as opposed to regretting the dumb thing you said to your boss in the elevator — use the emotion as a springboard to examine what truly *is* important to you. Consider the values you most want to stand for, and the values that are core to your identity.

One of my clients came to see me after feeling guilty about how angrily she speaks to people. Together, we worked on utilizing her remorse to pinpoint the virtues she most cherishes — "I care about being nicerather than being right" was one — since focusing on the damage already done wouldn't do her or her relationships any good. Take the time to ask yourself *why* you feel such profound regret and work backward to identify the valuesthat are tied up in your feelings. Unraveling that knot can help you use that as motivation for personal growth.

Step 6: Take action

There's a Japanese art called *kintsugi.* Literally translated, this means "golden repair." But it's much morethan that. Kintsugi is a philosophy of repairing broken things, like cracks in pottery, for example. Rather than hide an item's imperfections, the reparation process highlights them. Those imperfections are considered part of an item's history and repairing it this way can add beauty to the original items — like using precious metal to fix cracks inpottery. Make a list of regrets large and small, then brainstorm exactly how to take steps to remedy whatever is haunting you. The ultimate cure for anticipating regret isn't feeling lousy or overthinking. It's thoughtfullypursuing solutions, and using the wisdom gained through self- reflection to act.

Reading #5: "*What Is Nostalgia Good For?*"

Quite a Bit, Research Shows

NY TIMES – Science Times (Jul 8, 2013)
By John Tierney

Not long after moving to the University of Southampton, Constantine Sedikides had lunch with a colleague in the psychology department and described some unusual symptoms he'd been feeling. A few times a week, he was suddenly hit with nostalgia for his previous home at the University of North Carolina: memories of old friends, Tar Heel basketball games, fried okra, the sweet smells of autumn in Chapel Hill.

His colleague, a clinical psychologist, made an immediate diagnosis. He must be depressed. Why else live in the past? Nostalgia had beenconsidered a disorder ever since the term was coined by a 17th-century Swiss physician who attributed soldiers' mental and physical maladies to their longing to return home — nostos in Greek, and the accompanying pain, algos.

But Dr. Sedikides didn't want to return to any home — not to Chapel Hill, not to his native Greece — and he insisted to his lunch companion that he wasn't in pain.

"I told him I did live my life forward, but sometimes I couldn't help thinking about the past, and it was rewarding," he says. "Nostalgia made me feel that my life had roots and continuity. It made me feel good about myself and my relationships. It provided a texture to my life and gave me strength to move forward."

The colleague remained skeptical, but ultimately Dr. Sedikides prevailed. That lunch in 1999 inspired him to pioneer a field that today includes dozens of researchers around the world using tools developed at his social-psychology laboratory, including a questionnaire called the Southampton Nostalgia Scale. After a decade of study, nostalgia isn't what it used to be — it's looking a lot better.

Nostalgia has been shown to counteract loneliness, boredom and anxiety. It makes people more generous to strangers and more tolerant of outsiders. Couples feel closer and look happier when they're sharing nostalgic memories. On cold days, or in cold rooms, people use nostalgia to literally feel warmer.

Nostalgia does have its painful side — it's a bittersweet emotion — but the net effect is to make life seem more meaningful and death less frightening. When people speak wistfully of the past, they typically become more optimistic and inspired about the future. "Nostalgia makes us a bit more human," Dr. Sedikides says. He considers the first great nostalgist to be Odysseus, an itinerant who used memories of his family and home to get through hard times, but Dr. Sedikides emphasizes that nostalgia is not the same as homesickness. It's not just for those away from home, and it's not a sickness, despite its historical reputation.

Nostalgia was originally described as a "neurological disease of essentially demonic cause" by Johannes Hoffer, the Swiss doctor who coined the term in 1688. Military physicians speculated that its prevalence among Swiss mercenaries abroad was due to earlier damage to the soldiers' ear drums and brain cells by the unremitting clanging of cowbells in the Alps.

A Universal Feeling

In the 19th and 20th centuries nostalgia was variously classified as an "immigrant psychosis," a form of "melancholia" and a "mentally repressive compulsive disorder" among other pathologies. But when Dr. Sedikides, Tim Wildschut and other psychologists at Southampton began studying nostalgia, they found it to be common around the world, including in children as young as 7 (who look back fondly onbirthdays and vacations).

"The defining features of nostalgia in England are also the defining features in Africa and South America," Dr. Wildschut says. The topicsare universal — reminiscences about friends and family members, holidays, weddings, songs, sunsets, lakes. The stories tend to featurethe self as the protagonist surrounded by close friends.

Most people report experiencing nostalgia at least once a week, andnearly half experience it three or four times a week. These reportedbouts are often touched off by negative events and feelings of loneliness, but people say the "nostalgizing" — researchers distinguish it from reminiscing — helps them feel better.

To test these effects in the laboratory, researchers at Southampton induced negative moods by having people read about a deadly disaster and take a personality test that supposedly revealed them to be exceptionally lonely. Sure enough, the people depressed about the disaster victims or worried about being lonely became more likely to wax nostalgic. And the strategy worked: They subsequently felt less depressed and less lonely.

Nostalgic stories aren't simple exercises in cheeriness, though. The memories aren't all happy, and even the joys are mixed with a wistful sense of loss. But on the whole, the positive elements greatly outnumber the negative elements, as the Southampton researchers found by methodically analyzing stories collected in the laboratory as well as in a magazine named Nostalgia.

"Nostalgic stories often start badly, with some kind of problem, but then they tend to end well, thanks to help from someone close to you," Dr. Sedikides says. "So you end up with a stronger feeling of belonging and affiliation, and you become more generous toward others."

A quick way to induce nostalgia is through music, which has become a favorite tool of researchers. In an experiment in the Netherlands, Ad J. J. M. Vingerhoets of Tilburg University and colleagues found that listening to songs made people feel not only nostalgic but also warmer physically.

That warm glow was investigated in southern China by Xinyue Zhou of Sun Yat-Sen University. By

tracking students over the course of a month, she and colleagues found that feelings of nostalgia weremore common on cold days. The researchers also found that people in a cool room (68 degrees Fahrenheit) were more likely to nostalgize than people in warmer rooms.

Not everyone in the cool room turned nostalgic during the experiment, but the ones who did reportedfeeling warmer. That mind-body link, Dr. Wildschut says, means that nostalgia might have had evolutionary value to our ancestors long before Odysseus.

"If you can recruit a memory to maintain physiological comfort, at least subjectively, that could be an amazing and complex adaptation," he says. "It could contribute to survival by making you look for foodand shelter that much longer."

Finding a Sweet Spot

Of course, memories can also be depressing. Some researchers in the 1970s and '80s suggested that nostalgia could worsen a problem that psychologists call self-discontinuity, which is nicely defined in"Suite: Judy Blue Eyes," by Stephen Stills: "Don't let the past remind us of what we are not now." This sense of loss and dislocation has repeatedly been linked to both physical and mental ills.

But the feeling of discontinuity doesn't seem to be a typical result of nostalgia, according to recent studies. In fact, people tend to have a healthier sense of self-continuity if they nostalgize more frequently, as measured on the scale developed at Southampton. To understand why these memories seem reassuring, Clay Routledge of North Dakota State University and other psychologists conducted a series of experiments with English, Dutch and American adults.

First, the experimenters induced nostalgia by playing hit songs from the past for some people and letting them read lyrics to their favorite songs. Afterward, these people were more likely than a control group to say that they felt "loved" and that "life is worth living."

When the researchers tested the effect in the other direction by trying to induce existential angst. They subjected some people to an essay by a supposed Oxford philosopher who wrote that life is meaningless because any single person's contribution to the world is "paltry, pathetic and pointless." Readers of the essay became more likely to nostalgize, presumably to ward off Sartrean despair.

Moreover, when some people were induced to nostalgia before reading the bleak essay, they were less likely to be convinced by it. The brief stroll down memory lane apparently made life seem worthwhile, at least to the English students in that experiment. (Whether it would work with gloomy French intellectuals remains to be determined.)

"Nostalgia serves a crucial existential function," Dr. Routledge says. "It brings to mind cherished experiences that assure us we are valued people who have meaningful lives. Some of our research showsthat people who regularly engage in nostalgia are better at coping with concerns about death."

Feeding the Memory Bank

The usefulness of nostalgia seems to vary with age, according to Erica Hepper, a psychologist at the University of Surrey in England. She and her colleagues have found that nostalgia levels tend to be high among young adults, then dip in middle age and rise again during old age.

"Nostalgia helps us deal with transitions," Dr. Hepper says. "The young adults are just moving away from home and or starting their first jobs, so they fall back on memories of family Christmases, pets and friends in school." Dr. Sedikides, now 54, still enjoys nostalgizing about Chapel Hill, although his range has expanded greatly over the past decade. He says that the years of research have inspired strategies for increasing nostalgia in his own life. One is to create more moments that will be memorable.

“I don’t miss an opportunity to build nostalgic-to-be memories,” he says. “We call this anticipatory nostalgia and have even started a line of relevant research.” Another strategy is to draw on his “nostalgic repository” when he needs a psychological lift or some extra motivation. At such moments, he tries to focus on the memories and savor them without comparing them with anything else.

“Many other people,” he explains, “have defined nostalgia as comparing the past with the present and saying, implicitly, that the past was better — ‘Those were the days.’ But that may not be the best way for most people to nostalgize. The comparison will not benefit, say, the elderly in a nursing home who don’t see their future as bright. But if they focus on the past in an existential way — ‘What has my life meant?’ — then they can potentially benefit.”

This comparison-free nostalgizing is being taught to first-year college students as part of a study testing its value for people in difficult situations. Other experiments are using the same technique in people in nursing homes, women recovering from cancer surgery, and prison inmates.

Is there anyone who shouldn’t be indulging in nostalgia? People who are leery of intimate relationships — “avoidant,” in psychological jargon — seem to reap relatively small benefits from nostalgia compared with people who crave closeness. And there are undoubtedly neurotics who overdo it. But for most others, Dr. Sedikides recommends regular exercises.

“If you’re not neurotic or avoidant, I think you’ll benefit by nostalgizing two or maybe three times a week,” he says. “Experience it as a prized possession. When Humphrey Bogart says, ‘We’ll always have Paris,’ that’s nostalgia for you. We have it, and nobody can take it away from us. It’s our diamond.”

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OLLI at American University (Spring 2024)
"252: Exploring Our Hidden Brain: How Emotions Shape Our Decisions"

HB Podcast Archives (2014-21): (https://www.npr.org/series/423302056/hidden-brain/archive**)**
HB Podcast Archives (2021-24): (https://hiddenbrain.org/category/podcast/**)**

CLASS #7 - OUTLINE (May 1)

'HIDDEN BRAIN' Podcasts

Topic A – MEANING and PURPOSE

HB Podcast 1: "Cultivating Your Purpose" (Edited: 18:04) Having a sense of purpose can be a buffer against the challenges we all face at various stages of life. Purpose is different than meaning and can boost our health and longevity. Cornell University psychologist Anthony Burrow explains why purpose isn't something to be found. (Original 57:04 – Jun 22, 2021)

Reading 1: "The Benefits of Having a Sense of Purpose" by Jackie Swift

Class discussion

Topic B – BIASES

HB Podcast 2: "When It Comes To Politics and 'Fake News,' Facts Aren't Enough" (Edited 10?:00) (Dec 25, 2017) Facts aren't enough to get rid of our implicit biases: There are some topics about which it seems no amount of data will change people's minds: things like climate change, or restrictions on gun ownership. (Original; 24:31)

Reading 2: "The Influential Mind" by Tali Sharot, cognitive neuroscientist at University College London.

Reading 3: "Understanding Unconscious Bias: Stereotypes, Prejudices, Discrimination" by F. Menzies

Reading 4: "If You Can Say It. You Can Feel It" by Melissa Dahl

Video 3: "Neuroscience of Unconscious Bias" (2:21)

Class discussion

Topic C– INFORMATION AVOIDANCE

HB Podcast 3: "How We Use Strategic Ignorance" (3:32) (Dec 22, 17) Social science research explores how our minds push away information that gets in the way of our feelings and desires.

HB Podcast 4: "Why We Think Ignorance Is Bliss, Even When It Hurts Our Health" (4:53) **(**Jul. 28, 2014) People sometimes avoid information because they're afraid of bad news. But this "information aversion" can lead people to avoid medical tests that could save their lives. (w/text)

Reading 4: "Why People Use Information Avoidance to Choose Their Own Reality"

Topic D– CREATION OF LANGUAGE

Video 1 "The Language Instinct" (8:23) – Steven Pinker and Richard Dawkins

Reading 6: "How the Mind Creates Language" by Steven Pinker

Reading #1: *"The Benefits of Having a Sense of Purpose"*

Cornell Research - Dec 7, 2020
By Jackie Swift

Note: text was edited by combining other segments of Mr. Burnell's research and essays.

Stop and think for a moment: What gives your life purpose? You may find this difficult to answer. You may even think at first that you have no purpose, but as you reflect on the question, your answer and the sense of balance it brings may surprise you.

A sense of purpose is integral to the human experience, says Anthony L. Burrow, department of Human Development at Cornell University. and director of the Purpose and Identity Processes Laboratory at Cornell University. His work contributes to a growing body of research on the benefits of developing a sense of purpose. "Purpose is a forward-looking directionality, an intention to do something in the world," he says. "It's different than a goal, which can be accomplished. Wanting to be a father is a goal because it is achievable. But to be a great father is more of an intention than an achievement. On some days, one might come closer to the ideal than others, but it is never a completed task."

Having a sense of purpose brings lifelong benefits, Burrow explains. He points to research by others that has shown that purposeful people actually tend to live longer and are less sick. "The findings are mind-blowing," he says. "The question I am asking is, why? What is purpose actually doing for people?"

Staying Even-Keel in Negative Situations

One of Burrow's earliest research studies looked at the role a sense of purpose plays in how we relate to the world around us. He and his collaborators asked college students in Chicago to ride the north-south train corridor from one end to the other. The researchers already knew from others' studies that people feel increasingly uncomfortable the more people around them diverge from their own racial and ethnic background. Now they wanted to see whether a sense of purpose had any impact on that phenomenon.

Burrow and his colleagues asked the students beforehand to write for five minutes about what gave their life purpose or about the last movie they had seen, the latter serving as a control question. Then the students boarded the train and recorded their mood at each stop along the way. Unknown to them, the researchers were also keeping track of the ethnic composition of the passengers in the train car.

"We are confronted with the ups and downs of life, but purpose is an active ingredient that helps us stay stable."

As expected, the students who had written about the control question recorded feeling increasingly uneasy as the ethnic makeup of their fellow passengers diverged from their own ethnicity. However, those who had written about their sense of purpose had a different outcome. "They were emotionally even-keel," Burrow says. "Their mood was not contingent on the population of the passengers around them. This is one of the things we believe a sense of purpose affords us; it gives a sense of psychological homeostasis. We are confronted with the ups and downs of life, but purpose is an active ingredient that helps us stay stable."

Everyone Can Access the Benefits of Purpose

In the train study, some of the participants may not have initially been cognizant of their own sense of purpose, but when asked to reflect on it, they reaped the benefits as much as those who were already aware.

"It's not a story of the haves and have nots," Burrow says. "The rest of us, too, can access the benefits of purpose. Even with a fleeting opportunity to reflect on it, purpose mitigates reactivity."

This finding was born out in another study in which Burrow had participants first take a survey to ascertain their level of purpose in life and then keep a diary for 14 to 21 days. Those who scored higher on a sense of purpose recorded just as many everyday hassles as other people, but they weren't as emotionally affected by them. "It's not the absence of stress, it's how we react to it," Burrow says. "That's potentially the explanatory mechanism that affects health. Purposeful people can mitigate stress that would otherwise derail them. They are also more likely to report feeling positive emotions such as being calm and peaceful, cheerful, active and confident. In addition, they were significantly less likely to report physical symptoms, such as fatigue or having a headache or cough."

Resisting the Influence of Positive Feedback

Burrow was intrigued by his findings. If a sense of purpose truly offers a homeostatic set point for people, he reasoned, then it should work not only for negative situations but for positive ones, too. So, the Burrow lab devised a new study, bringing student volunteers into the laboratory ostensibly to test a new social networking site. In reality, there was no site, and the computers were not hooked up to the internet.

The participants were given a survey to measure their sense of purpose, then asked to start building a profile by first posting a selfie. After 15 minutes, the researchers told them that their selfies had gotten a below average, average, or above average number of likes. "We actually manufactured greater self-esteem in the people who were told that their selfie got more than the average number of likes," Burrow says.

However, those who had scored higher on the measure of purpose beforehand didn't experience greater self-esteem. In fact, they didn't react to being told they had more likes. "This indicates that whatever purpose is doing, it isn't just disrupting negative experiences; it's also having a measurable effect on positive experiences," Burrow continues. "It helps people stave off reactivity to something like getting a lot of likes on social media, which is a good thing because you don't want your self-esteem to be dependent on other people's opinions."

Anthony L. Burrow

A Sense of Purpose in Adolescents

Until about 15 years ago, purpose was thought to be primarily an adult phenomenon, but Burrow and others have questioned that belief. "Purpose is not just the domain of older adults," he says. "When we ask young people what are you going to major in, what are your interests, purpose is a part of that conversation. As adolescents, when we think about who we are, aren't we also thinking about who we want to become? Purpose is a developmental asset, and the earlier we start to cultivate it, the better off we are."

To explore the effects of purpose on youth, the Burrow lab worked with the New York State 4-H organization. The researchers had adolescents write about their sense of purpose or about a control question before attending the first day of a new 4-H program. The youth who did not write about purpose reported that they found the program less interesting, while those who did, reported more engagement with the program content. Based on those results, the Burrow lab, in collaboration with 4-H, built an app called Pioneer that educators can use to encourage adolescents to think about purpose in their lives.

"The kids can access this app, and it guides them through the exact questions we used in this study — questions like, 'What is your purpose?' and 'Where does it come from?'" Burrow says. "That gets the kids thinking about their purpose. Then, when you give them new information, they're thinking, 'How can I use

this where I'm going?' They're not checking out; they're thinking about the future."

A Sense of Purpose in Older Adulthood

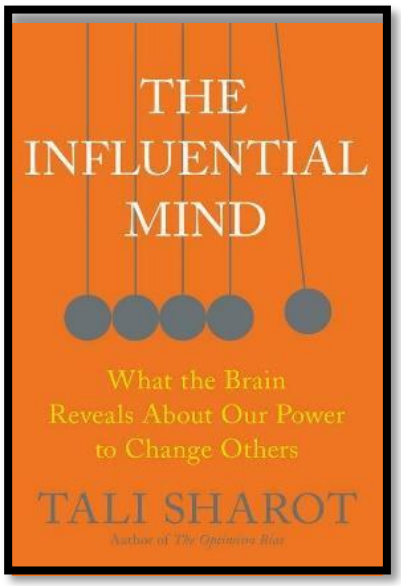
However, another component is to change the societal expectations and perceptions of older adulthood. For instance, a commonly held perception was that retirement provided a period of rest and relaxation, with the notion that the retired adult should be rewarded for the times spent serving in societally prescribed roles. Support for this point comes from research on expectations for losses and gains during adult development. For instance, findings suggested that participants generally expected that adults continue being leisurely and slow well into their 80s. Participants rated the traits of "purposeful" and "persevering" as becoming less common around typical retirement age (middle 60s). These conceptions are supported by evidence from meta-analytic work with retirement itself being a predictor of decline. More ever, qualitative work shows that when retirement community members are asked about their purpose in life, a common theme is the suggestion that older adults have outgrown a need for a purpose. In summary, the answer appears that having sense of purpose is not something expected of older adults. This research in the 1990s may be inaccurate for an era where people are living on average more than a decade following cessation of work.

Summary

In Anthony Burnell's recent book, *The Ecology of Purposeful Living Across the Lifespan* he considered how promoting a sense of purpose may be worked into the areas of role-transition that older adults often experience such as changes in employment, living situations, health and cognition.

"Across our work we consistently find that a sense of purpose in life is well worth having," Burrow said. "From improving our well-being, to reducing our reactivity to everyday stressors, and even to predicting downstream financial earnings and longevity, purpose emerges as a real resource for people."

<u>Reading #2:</u> "*How We Make Up Our Minds*"



NYTimes - Science Times
Review by Christopher Chabris:

THE INFLUENTIAL MIND
What the Brain Reveals About Our Power to Change Others
By Tali Sharot - Henry Holt. 242 pp $28

Social contagion fascinates us because its power seems out of proportion to its subtlety: We are so often unaware when it is happening to us. But it is justone of the ways people influence the behavior of others. Sharot, a London neuroscientist, covers the topic more fully and more authoritatively in a book whose title givesappropriately equal billing to thought, behavior and neurons.

Sharot writes, for example, about the remarkable fact that only 39 percent of hospital workers wash theirhands properly. A study found that putting them under webcam surveillance didn't improve things but adding a continuous digital display of the number of people following the rules brought compliance up to90 percent. This dramatic improvement combines new technology with old psychology: Positive reinforcement (the reward of being told you are doing your job well) can often change behavior more than punishment. Sharot suggests that it also gives people a greater sense of control, which is more motivating than a sense of restriction.

Her book is a witty survey of techniques to influence and guide human behavior. But there is still a lot more to be learned about how to best apply cognitive science to our everyday problems. We can't all be monitored by webcam-compliance-centers and be motivated only by digital leaderboards.

Christopher Chabris is a professor at Geisinger Health System in Pennsylvania and a co-author, with Daniel Simons, of "The Invisible Gorilla: How Our Intuitions Deceive Us."

Review by Claire Nana:

"It seems to me that the people with the most important message, those who have the most useful advice, are not necessarily the ones who have the largest impact," writes Tali Sharot.

In her new book, *The Influential Mind: What the Brain Reveals About Our Power to Change Others,* Tali Sharot, who is also the author of *The Optimism Bias,* explores the phenomenon of influence – what we so often get wrong about it, how we can learn to influence others, and how to understand when we are being influenced.

Every single day, four million new blogs are written, eighty million new Instagram photos are uploaded, and 616 million new tweets are released into cyberspace. People simply love propagating information and sharing opinions.

In fact, sharing of information is so rewarding that in one study conducted at Harvard, people were willing to forego money in order to have their opinions broadcast to others. The problem, however, is that we often approach the desire to make what Steve Jobs called a "dent in the universe" from inside our own heads.

"When attempting to create impact, we first and foremost consider ourselves. We reflect on what is persuasive to us, our state of mind, our desires, and our goals. But, of course, if we want to affect the behaviors and beliefs of the person in front of us, we need to understand what goes on inside their heads and go along with how their brain works," writes Sharot.

Changing people minds, however, also has to align with core elements of how we all think, such as prior experiences, emotions, incentives, agency, curiosity, state of mind, and other people.

Consider data as an example. According to Sharot, while we seem to love data, and believe that our brains should use it to weigh decisions carefully, our emotions – motives, fears, hopes, and desires – actually have greater power over our decisions. More frequently, we look for data that confirms our already existing beliefs.

"When you provide someone with new data, they quickly accept evidence that confirms their preconceived notions (what are known as prior beliefs) and assess counter evidence with a critical eye," writes Sharot.

A better approach, argues Sharot, is to find and build on common ground and shared beliefs. This is also why powerful speeches often result in a synchronization in the brains of the audience, an effect that helps us create associations, generate and process emotions, and place ourselves in the shoes of others – a requirement for empathy. While our intuition tells us that our emotions are private, Sharot says they are, in fact, absorbed instantlyand unconsciously by those around us.

"When conducting experiments in the lab, I am often amazed by how similar people are in responding to questions and performing tasks, especially when those tasks involve emotional or social factors," writes Sharot.

One fascinating example of the utility of social norms was found in a study in which the use of electronic boards monitored and gave positive feedback every time a staff member washed their hands. The result was an immediate 90 percent increase in hand washing.

Anticipating a reward is hardwired into our brains, helping us observe the law of approach and

avoidance. But it also elicits action. "We execute actions to bring us closer to a piece of cherry pie, a loved one, or a promotion, and we distance ourselves from an allergen, a bad relationship, or a failing project," writes Sharot.

The feeling of control — while at times alluring us into otherwise irrational decisions — plays a major role in our health and happiness. In one study, a group of elderly patients who were told to take full responsibility for themselves and given a plant to care for, were happier and participated in more activities than another group given the same level of care but told that they wouldn't need to lift a finger.

"Our instinct when trying to influence others' actions is to give orders. This approach often fails, because when people feel their independence has been limited, they get anxious and demotivated and are likely to retaliate. In contrast, expanding people's sense of agency makes them happier, healthier, more productive, and more compliant," writes Sharot.

Understanding people's need for independence is part of a larger ability, known as the "theory of mind" that allows us to think about what other people are thinking.

"You are influenced by others, but do not be fooled — others are also influenced by you. This is why your actions and choices matter not only for your own life but for the behavior of those around you," writes Sharot.

Revealing not just the systematic mistakes we make when trying to persuade others, but brilliantly exposing the science of influence, Sharot's book is essential reading for anyone who wants to have their voice heard, which seems to be everyone.

<u>Reading #3:</u> *"Understanding Unconscious Bias: Stereotypes, Prejudice and Discrimination"*

By Felicity Menzies, FCA**,** CEO, Diversity & Inclusion Consultant at Include-Empower

Stereotypes refer to beliefs that certain attributes, characteristics, and behaviors are typical of members of a particular group of people. The way we categorize social groups is often based on visible features that provide the largest between-group differentiation and least within-group variation (for example, skin color, gender, age). We construct stereotypes from direct personal experience or, more commonly, from other people, or via the media. The media has a large influence on stereotype formation when we have limited opportunities for meaningful exchange with people from outside our own social group.

The benefits of stereotypes

The human brain has a natural tendency to categorize everything. At any one time, our brain is bombarded with an infinite number of stimuli. Without an efficient method of making sense of this information, our brains would become overloaded. By sorting stimuli (for example, experiences, objects, people) into categories, we can process our environments more efficiently. This frees up mental resources for other tasks.

Categorizing people helps us to navigate our social world more efficiently. Social categorization provides a sense of order and predictability that we can rely on to guide our interactions with others. Our stereotype for the elderly alerts us to speak loudly in their company. When we are ill, our stereotype for doctors leads us to seek out and trust their advice.

Differences in the tendency to stereotype

Researchers have demonstrated that individuals with a greater need for control are more likely to use stereotypes. In addition, when we have limited mental resources available for making sense of our social

environment, we rely more on stereotypes to make judgements and guide our behaviors. Reliance on stereotypes is more pronounced when we are distracted by another mentally taxing task, or when we are under emotional or physiological stress.

The problems with stereotypes

a) Socially-constructed.

Some stereotypes are informed generalizations about a group of people. It is generally true, for example, that younger people have better hearing than older people. Yet many of our stereotypes are invalid—particularly when they are based on race, religion, or gender. Because of this, stereotypes can be problematic and counter-productive when working with diverse others.

b) Arbitrary

Stereotypes are arbitrary ways of categorizing individuals. No social group is homogenous. Stereotypes might not accurately represent the characteristics of a particular member of that group.

Biased

Research shows we that believe individuals from the same social group to be more similar than they really are. We also tend to exaggerate the differences between social groups. An American is likely to believe that all German people are very similar across a broad range of characteristics, and that Germans are very different from Italians. Researchers also report bias in our categorizations of out-groups and in-groups. Out-groups are social groups to which we do not perceive ourselves as belonging. In-groups are the social groups with which we most identify. We perceive members of out-group members as sharing similar characteristics, but we think of in-group members as having unique characteristics and attributes.

Prejudice & discrimination

As well as shaping our beliefs about people, stereotypes drive social judgements. Prejudice refers to our feelings or attitudes about a group and its members. Prejudice is commonly associated with stereotypes; our evaluations of others reflect what we believe to be true about them. Discrimination refers to differential (usually unfair or negative) treatment of individuals perceived to be belonging to a particular social group; for example, being overlooked in promotion or hiring, or being treated with hostility. Discrimination is linked to stereotypes and prejudice. Strong egalitarian social norms, however, might deter a prejudiced person from acting in a discriminatory manner.

Bias in the workplace

Stereotypes, prejudice, and discrimination create physical and emotional distance between members of different social groups. Mild forms of bias can lead to awkward and uncomfortable interactions, intentional or unconscious avoidance, and interactions lacking warmth or civility. More extreme forms of bias can lead to tension and conflict, hostility, harassment, or aggression. Stereotypes and other forms of bias can overshadow the strategic benefits of diversity by preventing all employees from contributing to work processes. Companies that do not address internal bias might also face
costly discrimination claims.

Unconscious bias

Researchers have shown that stereotyping and associated responses are automatic and unconscious. A particularly disturbing example involves a series of experiments in which participants played a video game. During the game, an individual who was sometimes White and sometimes Black appeared spontaneously, carrying either a gun or a different, non-threatening object. The participants were told to 'shoot' when the intruder was carrying a gun, but to press another key if the intruder was carrying a benign object. The results showed that the number of times the participants accidentally perceived the object to be a gun was much higher for the Black intruder than for the White intruder. The results were similar for White and Black participants, indicating that negative stereotypes can exist intragroup as well as intergroup.

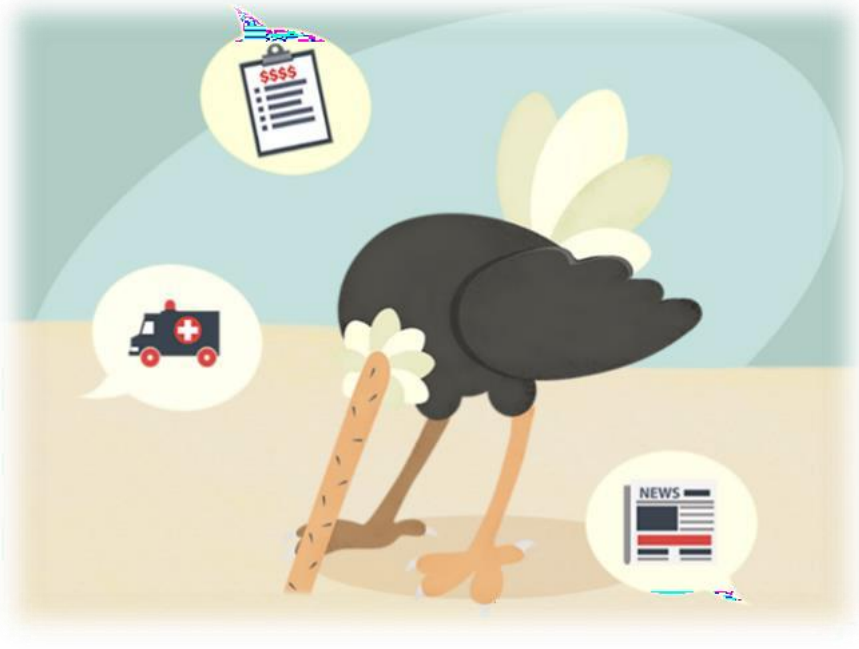
Stereotype resistance
Stereotypes are maintained and reinforced by powerful mental biases that filter out information that contradicts or challenges preexisting beliefs or attitudes.

Attribution bias
Stereotypes are maintained by biases in the attributions we make about a person's behaviour. When a person behaves in accordance with a stereotype, we attribute that behaviour to the stereotypical characteristic they share with other members of their group. This reinforces the stereotype. However, if an individual behaves in contrast to a group stereotype, we are more likely to attribute that behaviour to external causes, preserving the integrity of the stereotype.

Attention bias
Similarly, research shows we pay more attention to action that is consistent with a stereotype than to action that contradicts a stereotype.

Subtyping
When a member of a stereotyped group displays counter-stereotypical qualities, this might also evoke subtyping. Subtyping involves explaining an exception by assigning that individual to a subcategory of the stereotyped group rather than modifying the original stereotype. Stereotyped individuals might act in a manner consistent with the stereotype as they react to out-groupmembers. For example, if an outsider believes that a social group is aggressive, this might cause him or her to act antagonistically or with animosity towards members of that group.

<u>Reading #4:</u> "If You Can Say It. You Can Feel It"



Some scientists believe we have infinite emotions, so long as we can name them.

New York Magazine – Feb 3, 2020
By Melissa Dahl

It feels like I know what a feeling is. Across the centuries, both ancient philosophers and modern psychologists have arrived at the same basic understanding that there are a limited number of discrete human emotions, preset by the human psyche. The Confucian text Liji lists seven feelings thought to be innate: joy, anger, sadness, fear, love, hate, and desire. Fifteen-hundred years later, René Descartes echoed this idea when he named wonder, love, hatred, desire, joy, and sadness as the six "primitive passions." In the 1970s, the renowned psychologist Paul Ekman identified six "basic emotions" — you may recognize some of them from the cast of Disney/Pixar's Inside Out: happiness, sadness, anger, disgust, fear, and surprise. (Sometimes contempt gets thrown in there too.) More recently, Ekman and other researchers have bumped the number up to 27, adding emotions like aesthetic appreciation, empathetic pain, nostalgia, and awkwardness.

The point is, according to a few millennia of inquiry, there are finite ways to feel. Sometimes it may seem as

if we're experiencing a "new" emotion, but look more closely and you'll find it's the known emotions layered on top of one another. A newfangled emotion like the social anxiety of "fear of missing out" (FOMO), is probably something like envy layered on top of fear, maybe with a little sadness. Emotions are what they are, and they exist the same way in each one of us, whether we recognize them for what they are or not.

That's one way of looking at feelings, anyway. The wildest thing about the study of human emotions is that researchers haven't even agreed on a definition of what they're studying. (This is not unique among the social sciences; researchers who study personality or intelligence fight similar semantic battles.) The Neuroscience of Emotion, a 2018 summary of the field's current state, listed six leading theories of what emotions are. Five of those differ in detail, but they agree broadly that an emotion is an objective state that manifests in a variety of reliable, measurable ways, including behavior, facial expression, heart rate, blood pressure, and stress-hormone levels. And then there's the sixth theory: constructed emotion.

Lisa Barrett Feldman

To a layperson, it's fascinating to think that emotions are more subjective than we might have imagined. To neuroscientists, it's more than a philosophical debate. The way they decide to define emotion shifts the way they search for treatments for emotional problems, including mood disorders like depression or anxiety. Barrett argues that if emotions were simply biological, then you'd expect an emotion to look similar in every person's brain. And yet, across multiple studies, researchers have scanned the brains of people who all claim to be experiencing the same emotion, such as fear, and the fMRI readouts from those studies don't have much in common.

If all human emotions are constructed, then that means they can also be deconstructed, or even reconstructed. David J. Anderson, co-author of The Neuroscience of Emotion and a neurobiologist at the California Institute of Technology, points out that, in mice, he has been able to evoke defensive behaviors, like freezing or flight — which animals (and people) typically show when in a state of fear — by stimulating "very specific populations of neurons in very specific brain regions," like the amygdala or hypothalamus. His research and others' have suggested the existence of multiple "fear circuits" in the brain that are involved in producing an emotion like fear or anxiety. "The fact that there isn't a unitary and singular locus that participates in an emotion doesn't mean that there's no geography to the emotion at all in the brain," he says.

It's fear, as well as disgust, that gives me pause when considering constructed-emotion theory. If emotions are constructed, then why do so many of us construct the same one when we see a snake?

There's a famous patient known as SM who suffered damage to her amygdala due to a rare genetic condition; as a result, she feels no fear. Snakes don't bother her, as researchers found out the hard way. "She had to be restrained from playing with the ones that would actually be quite dangerous to her," writes Antonio Damasio, a neuroscientist at the University of Southern California who has studied SM.

"I think if you rank-ordered them, fear and disgust and aggression would probably be the three that are the clearest. The evidence that other animals have those emotions, the evidence for particular brain regions for them, is just overwhelming," says Ralph Adolphs, a neuroscientist at Caltech and the other co-author of The Neuroscience of Emotion. "On the other hand," he continues, "that's about it."

When it comes to the social emotions, for instance, like embarrassment or guilt, evidence of neurobiological markers gets much murkier. "You certainly don't find them in rats," Adolphs says. "Maybe you find them in dogs, but it's hard to tell if we anthropomorphize." It does make a certain intuitive sense to think that uniquely human social emotions are socially constructed. There may not be a biological pattern that predicts Schadenfreude, but that doesn't mean I didn't luxuriate in it while watching the HBO documentary on Elizabeth Holmes. Or think about those viral lists of "untranslatable emotions from other languages"; it

starts to seem reasonable, even obvious, that our environment must shape our emotions. But take that a step further: If, as Barrett argues, all human emotions are constructed, then that means they can also be deconstructed, or even reconstructed.

In December 2017, Barrett gave a TED Talk in which she argued that you have more control over your emotions than you think you do. The sheepish self-help-book reader in me is exhilarated by the

word control. The notion that you can transform your emotions through words — I want to flag down random passersby and ask them if they've heard the good news. I want to tell them about the research in psychology that found that changing what you call a feeling can change the way you feel it. In numerous studies, students were told to interpret their pre-exam butterflies in one of two ways: either as anxiety or excitement. And wouldn't you know, the excited butterflies performed better on the tests.

Critics of Barrett's theory worry that to accept this idea would mean rejecting most medical treatments. "To some extent, yes, we are constructing our own depression and anxiety," Adolphs says. "But that can't be the entire story, because otherwise drugs would never work!" But, well, antidepressants don't always work. A study published in The Lancet in 2018 found that all 21 of the antidepressants investigated were more effective than a placebo, and for the people they help, they can be lifesaving. But other research has found that about 60 percent of users' symptoms will improve within about two months. Barrett has speculated that depression could be the result of chronic imbalances in the body. In other words, it's not necessarily just a brain problem.

Psychology studies have found that people who are better at putting their emotions into words are less likely to engage in destructive behaviors like binge drinking or self-harm. "Rather than proceeding,

without thinking, straight to the compulsive behavior," writes psychiatrist Mark Epstein in his 2018 book, Advice Not Given, "naming the feeling allows for a pause." During that pause, you tell yourself a story about the emotion, of how it came about and how it might go away, based on the times you've felt it before. The thing that's been hard for me to accept is that, if emotions are not biologically programmed, there is no objective truth to our emotional states. A racing heart and scattered mind could be proof that you are falling in L-O-V-E or that you're panicked. Both are true; neither is true.

Emotions are 100 percent real. Could they also be 100 percent made up?

Reading #5: *'Why People Use Information Avoidance to Choose Their Own Reality"*

A new study explains why and how people chooseto avoid information and when that strategy could be beneficial.

THE BIG THINK – Mar. 19, 2017

Researchers from Carnegie Mellon University pinpointed the strategies that modern people rely on more and more to support their own versions of reality. On the surface, it may seem that rational people would always want to have more information, but that is often not the case. In fact, people actively avoid information that they feel might threaten theirsense of wellbeing or happiness. In a new paper that was published the Journal of Economic Literature, the team drew on cross-disciplinary research from economics, psychology and sociology to show how people use a variety of information avoidance strategies. One way - by simply not obtaining

available information. Just don't ask for it. Another - people tend to only pay attention to the information that confirms what they already believe or is somehow making them feel good about themselves. The information that they'd rather see as untrue, people simply forget.

"The standard account of information in economics is that people should seek out information that will aid in decision-making, should never actively avoid information, and should dispassionately update their views when they encounter new valid information," said the economics and psychology Professor George Loewenstein, the paper's co-author who also co-founded the field of behavioral economics.

"But people often avoid information that could help them to make better decisions if they think the information might be painful to receive. Bad teachers, for example, could benefit from feedback from students, but are much less likely to pore over teaching ratings than skilled teachers," Loewenstein explained.

When confronted with information they cannot just ignore, people still choose how to interpret it. They allow their biases to elevate questionable evidence if it agrees with their views and discount vigorously proven scientific evidence if it goes against their beliefs.

There are also other real-world consequences to living in your own bubble and avoiding information. These are people who miss chances to catch and treat serious illnesses early or do not prepare financially for retirement. In what has been called "the ostrich effect" in behavioral finance, investors were found to check their online portfolios less frequently when the stock market was down.

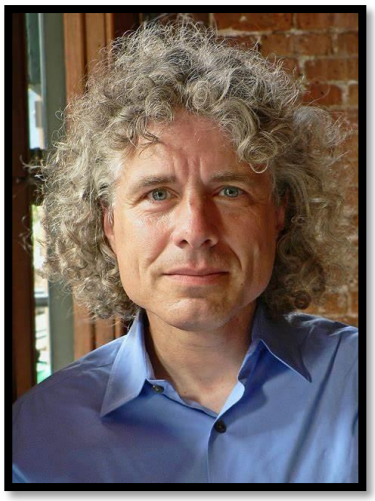
"The standard account of information in economics is that people should seek out information that will aid in decision-making, should never actively avoid information, and should dispassionately update their views when they encounter new valid information," said Loewenstein, the Herbert A. Simon University Professor of Economics and Psychology who co-founded the field of behavioral economics. "But people often avoid information that could help them to make better decisions if they think the information might be painful to receive. Bad teachers, for example, could benefit from feedback from students, but are much less likely to pore over teaching ratings than skilled teachers," Loewenstein said.

Even when people cannot outright ignore information, they often have substantial latitude in how to interpret it. Questionable evidence is often treated as credible when it confirms what someone wants to believe — as is the case of discredited research linking vaccines to autism. And evidence that meets the rigorous demands of science is often discounted if it goes against what people want to believe, as illustrated by widespread dismissal of scientific evidence of climate change. Information avoidance can be harmful, for example, when people miss opportunities to treat seriousdiseases early on or fail to learn about better financial investments that could prepare them for retirement. It also has large societal implications.

"An implication of information avoidance is that we do not engage effectively with those who disagree with us," said Hagmann, a Ph.D. student in the Department of Social and Decision Sciences. "Bombarding people with information that challenges their cherished beliefs — the usual strategy that people employ in attempts at persuasion - is more likely to engender defensive avoidance than receptive processing. If we want to reduce political polarization, we need to find ways to expose people to conflicting information and increase people's receptivity to information that challenges what they believe and want to believe." Despite the consequences, information avoidance isn't always a mistake or a reflection of a lazy mind.

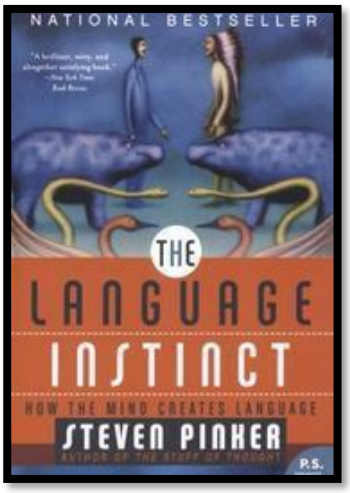
"People do it for a reason," said Golman, assistant professor of social and decision sciences. "Those who do not take a genetic test can enjoy their life until their illness can't be ignored, an inflated sense of our own abilities can help us to pursue big and worthwhile goals, and not looking at our financial investmentswhen markets are down may keep us from selling in a panic." The researchers believe understanding when, why and how people avoid information can help governments, firms and organizations reach their audiences effectively without drowning them in unwanted messages.

Reading #6: *"How The Mind Creates Language"*



THE LANGUAGE INSTINCT: How the Mind Creates Language

By Steven Pinker 388 pp. Morrow/HarperCollins



By Paul Ratner

There has been a revolution in the field of linguistics over the past 50 years, initiated by the work of Noam Chomsky. Prior to him, social scientists thought, consistent with the dominant Behaviorist perspective of the day (and also with common sense), that children picked up language from those around them through simple exposure, imitation, and reinforcement. Chomsky was the first to question this, and raised as counter-evidence the rather obvious observation that as children start using language, they often utter things that they almost certainly did not hear, such as "I eated the spaghetti yesterday" and "Why are you joking me so much?" It thus appeared that they were attempting to apply rules rather than imitating what they heard. This insight has led to a re-conceptualization of the field of linguistics and there has been an explosion of research on how grammatical rules are learned and what aspects of language might be universal across different cultures. There are many hypotheses, unsettled questions, and controversies in the field, but there have also been many insights, and I think we in the general public have not had enough exposure to these insights.

The most noted popularizer of the findings of modern linguistics is the best-selling author Steven Pinker, of Harvard University. Pinker has written two fantastic books that I want to discuss in this post: I will offer my summary of the points that I found most compelling. Below I list ideas that modern linguistics tells us about language:

1. **We acquire language effortlessly and may even have a specific instinct for it.** There are clearly some developmental periods where learning a native language is easy, and nearly all humans, regardless of IQ, socio-economic status, or parental rearing philosophy pick up their native language fluently. At the age of around three, children start speaking in fluid complex sentences. If a foreign language is learned before the age of about 12-13, the person can learn to speak it without an accent, whereas if a foreign language is learned after that, there will nearly always be an accent (an instance is Arnold Schwarzenegger, who has been in the U.S. and speaking English for 45 years). There is also experimental research that shows that **6-month-old infants** can audibly distinguish different sounds across the worlds languages, but after 6-months lose the ability to distinguish those sounds that are not in their native language (See the fascinating TED Talk on the linguistic genius of babies).

Pinker makes the case that humans have a specific 'instinct' for acquiring and using language and supports it with three areas of evidence. First is the **poverty of the input** argument which states that children do not experience sufficient input from their environment to develop the complex rules and structures of language—they are exposed to various words and sentences, but then must generalize to the complex rules of grammar, and they generate new creative sentences that generally follow these rules, well before they go to school and learn to diagram sentences. The second area of evidence is *creolization*, which is what happens when a pidgin language (a rough, simple patchwork of communicative phrases used by different linguistic peoples who are thrown together by some historical circumstance) is learned by children—they are turned into a full-blown language with complex rule- based

grammars, and the pidgin develops into a creole. This shows evidence of a native linguistic capability, and as Pinker puts it:

"…complex language is universal because children actually reinvent it, generation after generation—not because they are taught, not because they are generally smart, not because it is useful to them, but because they just can't help it." (Pinker, 1994, p.20).

The third area of evidence for the language instinct are *language impairments* that are due to injury (aphasia) or developmental disabilities (specific learning impairments) where individuals may be unable to use or comprehend certain types of grammar but seem otherwise to have normal intelligence.

I think that Pinker presents a compelling case for a language instinct, particularly when you reflect that nearly everyone, in a wide variety of environments, develops a mastery of their native language effortlessly, and can discern fine points of grammar and syntax even without fully realizing it (and without knowledge of syntactic trees, etc.) I was always struck by the advice, when learning a foreign language, to "check with a native speaker" to see if something is correct—not a language instructor, or even someone used to explain how language works, but any random person walking the street who happens to speak that language! This points to what an accomplishment-shared language are, and I would not be surprised if was confirmed that there is a specific, dedicated biological basis for it. I should mention, however, that the idea of a biological *language instinct* is controversial in the field of linguistics, and some linguists advocate the view that we acquire language through a general-purpose learning mechanism powered by a flexible intelligence. In either case, however, our ability to learn language is clearly remarkable, and ironically it is the very ease with which we wield it which leads us to take it for granted.

2. Despite alarmists who think language use is degenerating among the general public (and especially youth), everyday language usage is usually sophisticated, and rule governed. Let's start with the big picture here: the purpose of language is to communicate across minds, so if this is happening when people use language, and people able to communicate complex thoughts to one another, their use of language is doing its job. Now it may be the case, such as with slang, that some sub-groups adopt conventions that other groups are not familiar with, and thus parts of their language may seem unintelligible (I would bet that the same happens when every generation hears the style of music popular with the next generation). But upon rational analysis, the conventions of slang have definite meanings and rules of usage. Believe it or not, this even applies to *texting* (here is a TED Talk on how a linguist is looking at texting, by John McWhorter–he's excellent as I've also watched his overview of linguistics lecture series, produced by The Teaching Company).

There is a distinction between *descriptive* grammar and *prescriptive* grammar, and linguists focus on the former, which is how language is actually used by people (which is wonderfully complex and effective), and consider the latter to be of minor importance, largely consisting of overly strict rules (regarding the splitting infinitives, ending in a prepositions, etc.) that are imagined to lead to greater clarity (for people who were not confused in the first place). It is a fact that *language evolves over time t*hrough usage, adapting to new contexts and shedding unused forms, and nearly the whole time there are people who fret over any of these changes and would prefer to embalm a language in its present pristine form forever. But this is a myopic view; there are many ways that English has changed that were undoubtedly bemoaned by people of the time. For example, the Early Modern English second-person singular/plural pronoun distinction of 'thou' and 'you' has been collapsed into just 'you', and with it we lost the ability to make the distinction of referring to one or more than one person in the second-person (which is distinguished in many languages, as well as in the "y'all" of the American South). But in dropping 'thou' we also were able to jettison the related words 'thee', 'thy', and 'thine', and thus benefit from greater simplicity. It is also hypothesized that our past tense marker 'ed' might have been a collapse of a word combination adding '-did', and thus 'hammer-did' turned into 'hammered'. The point is that a language

never stays still and is ultimately responsive to the needs of the people who use it. There does appear to be a continual movement towards making things easier for speakers (historically it evolved towards the commoners usage patterns), but the *sophistication of a language is safeguarded* by the fact that it's users will demand from it the ability articulate their most complex thoughts, and thus a language will always contain intricate, nuanced, and subtle features.

Another observation from the viewpoint of linguistics is that dialects are full-fledged languages with regular rules of grammar and phonology that can be cataloged. I think we sometimes feel that if a language variant is derived from another, it is somehow corrupted, or at least inferior in some way to the source language, even though all of our modern languages are derivatives from some precursor language. When linguists study dialects, they see the full panoply of structures and rules, and invariably, there are always some patterns in the dialects that are more linguistically complex than those in the source language. This is the case, for example, in the dialect known as Black English Vernacular (also known as African American Vernacular English), where you can have two statements: "*He be workin'*." and "*He workin'*." The first denotes a current action, but the second denotes a habitual, i.e. a steady job, which he may or may not be doing at this instant. In Standard English, the same phrase is used for both "*He is working*" and does not distinguish between the two meanings. Thus, linguistics provides an impartial viewpoint that can help dispel our biased view of dialects. I am reminded here of the coining of the term 'barbarian' in Ancient Greek, which referred to, ahem–all non-Greek speaking peoples!

3. Language is not the same as thought and we are not completely 'confined' by our native language. I remember in college learning about the Sapir-Whorf hypothesis that a people's language drastically affects how they think, with the examples of the number of words Eskimos have for snow and the Hopi's lack of words for time (both have been 'debunked' as fanciful exaggerations). The conclusion that *language determines thought* is quite congenial to the standard social science paradigm because in that case people are entirely the products of their culture, and culture can be criticized/reformed without laying the blame on individuals. But of course, hoping something is true does not make it so. Pinker marshals several strands of evidence that indicate that thought is not the same as language:

- Infants who have not yet developed language skills have been shown, through experiments, to have thoughts regarding cause and effect, simple counting, and the conservation of matter (e.g. in pouring water from a tall to a wide glass)
- People also think in images, as when we compare the shapes of objects by mentally rotating them in our minds.
- New words are created (neologisms), when existing words in a language aren't up to the job
- We are able to create high fidelity translations from one language to another (excepting poetry, or evocative prose, perhaps)
- We sometimes struggle to express our thoughts and to "find the right words" that match our thoughts
- When 'euphemisms' are pointed out to us, we are not such prisoners of the words that we don't see through them (e.g. 'headcount rationalization', 'revenue enhancements', 'opportunity for development', 'collateral damage', 'I like you as a friend', etc.).

I think this is compelling evidence to show that thought is not confined by one's language(though can of course be influenced by it), and I think there are two upsides to this: first, it means that there may be some commonalities in the way we think as humans, which is an important area worth studying (Part 2 of this post will consider some findings from Pinker's *The Stuff of Thought*), and second, we don't have

to view language as a prison that confines us, but can *continually strive* to find better ways to express our thoughts, which also usually sharpens our thinking on the topic.

One type of observation on comparing languages has always puzzles me: when people point out that "there's no word in language X that is equivalent to it in language Y—it's untranslatable". Now I, along with everyone else, finds these cases to be interesting and insightful, but why do we set the bar so high that we expect a one-word for one-word translation of every concept? Maybe the more reasonable question to ask is: Can we translate the concept accurately using a short sequence of words? I would assume that 80% of these cases would instantly become much less interesting. Even in cases where there are various meanings, you could likely pick a translation that is appropriate for that context, much as translators do. Don't get me wrong, I don't want to deny human differences, I value them and want to learn from them, etc.; I just happen to think that we have much more in common with each other than we have differences, but that we sometimes are overly fixated on the differences, become enamored with the 'exotic', and create more separation between ourselves and other groups of people than is warranted.

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