

BEHAVIORAL NEUROSCIENCE

INTRODUCTORY COURSE





WHAT IS IT ?

According to Wikipedia, Behavioral Neuroscience is the application of the principles of biology to the study of physiological, genetic, and developmental mechanisms of behavior in humans and other animals.

My simple definition of it is the following: how our brain influences our behavior and viceversa.

DID YOU KNOW YOU HAVE 3 BRAIN INSIDE YOUR HEAD? EACH OF THEM HAS DIFFERENT ROLES



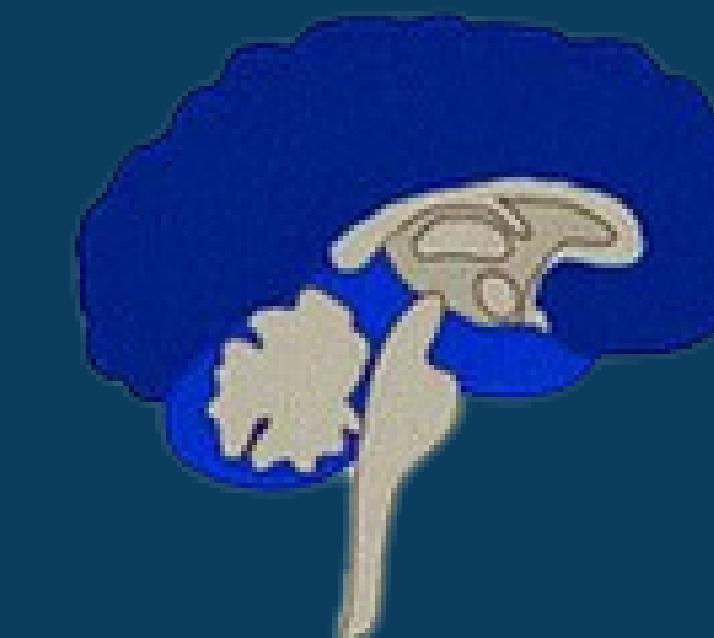
Lizard Brain
(Brain stem and cerebellum)

Autopilot
Fight/Flight
Survival Instinct



Mammal Brain
(Limbic System)

Emotions
Memories
Habits
Attachments



Human Brain
(Neo-Cortex)

Language
Abstract Thinking
Imagination
Self-Awareness

(From Paul D. MacLean's model of the "Triune Brain")

PCM © - PERSONALITY TYPES SUMMARY

Personality Type	Traits	Perception + Currency	Strengths	Psychological needs	When under stress
THINKER	- Logical/analytical - Takes in facts and ideas and synthesizes them	Thoughts with Logic	- Logical - Responsible - Organised	- Recognition of work - Time structure	- Over qualifies - Doesn't delegate - Over controls
PERSISTER	- Ability to give opinions, beliefs and judgments	Opinions with Values	- Dedicated - Observant - Conscientious	- Recognition of work - Convictions	- Focuses on what is wrong - Pushes beliefs
HARMONISER	- Ability to nurture and give to others - Creates harmony	Emotions with Compassion	- Compassionate - Sensitive - Warm	- Recognition of person - Sensory	- Over-adapts - Makes mistakes - Attracts criticism
IMAGINER	- Introspective - Good with things/tasks - Skilled with any work requiring dexterity	Reflections with Imagination	- Reflective - Imaginative - Calm	- Solitude	- Withdraws - Passively waits
REBEL	- Ability to see the humour in things and enjoy the present	Reactions with Humour	- Spontaneous - Creative - Playful	- (Playful) contact	- Invites others to do or think for them - Blames others
PROMOTER	- Ability to be firm and direct	Action with Charm	- Adaptive - Persuasive - Charming	- Incidence	- Expects others to fend for themselves - Manipulates - Breaks the rules

Did you also know that people('s personalities) are different in different ways?

On the leftside you have a breakdown of Taibi Kahler's PCM (Process Communication Model).

* Please see Page 5 for further details.

FURTHER DETAILS



FACT 1

Taibi Kahler is a leading researcher in the field of psychology and communication. He developed the 'Process Communication Model' (PCM) which is a tool used worldwide (also used previously by NASA and Bill Clinton) to enhance the human interaction through effective communication.

FACT 2

According to Taibi Kahler, people present a spectrum of six personality types. Understanding these types lets us discover the conditions people need to thrive, what are their distress patterns and their preferred communication channel.

FACT 3

There are many personality tests out there like Myers-Briggs or the Big 5 but one that is pretty new and can easily be used in the business environment is created by Ray Dalio, Dr. Adam Grant, Dr. Brian Little & Dr. John Golden. Links below:

Assessment: <https://principlesyou.com/>

Assessment Personality Types: <https://principlesyou.com/archetypes>

WHAT ABOUT OUR NEUROCHEMICALS?



While in a good mood it, wouldn't hurt to literally understand where your happiness is coming from on a brain level and how it works.

The picture breaks that down.

Good feelings

motivate steps that meet survival needs

Dopamine

energizes you when you find a new way to meet a need

Dopamine is the brain's signal that a reward is at hand. The great feeling motivates the body to invest effort in pursuit. Neurons connect when dopamine flows, which wires you to turn on the good feeling again in similar settings. Steps that meet needs feel good because of dopamine.

Serotonin

turns on when you gain an advantage

Serotonin makes you feel good when you assert yourself socially. In the state of nature, you had to assert but avoid conflict to survive. That built a brain that constantly compares itself to others and rewards you with a nice proud feeling when you come out on top.

Oxytocin

is the safety of social trust

Oxytocin is stimulated by trust and touch. It motivates a mammal to seek safety in numbers. Neurons connect when oxytocin flows, which guides your future trust. Our brain makes careful decisions about when to release this good feeling because trusting always is not good for survival.

Endorphin

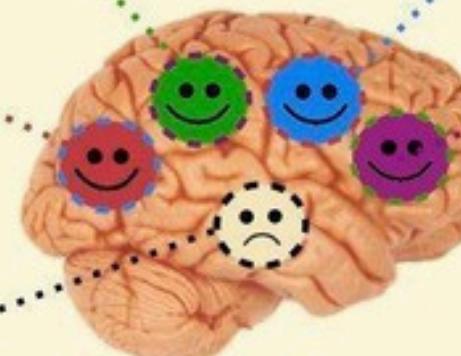
masks pain with euphoria

Endorphin is triggered by pain. It masks pain for a few minutes so an injured creature can seek safety. Then it stops, because pain is valuable information. Endorphin evolved for emergencies, not for you to inflict pain on yourself. Fortunately, laughing and exercise trigger a little bit of it.

Cortisol

alerts you to survival threats

Cortisol commands your attention when you perceive an external or internal threat. The bad feeling motivates a body to act fast to make it stop. Each cortisol spurt connects neurons that turn on the bad feeling faster in similar future circumstances. Disappointment triggers cortisol. When your expectations are not met, cortisol warns you to stop investing energy in an unrewarding pursuit.



Bad feelings
motivate retreat
from survival threats

Myelin

builds neural superhighways

Some of your neural pathways conduct electricity at super speeds because they got coated with myelin. That's why some thoughts and actions feel easy & natural. Myelin peaks before age 8 & in puberty, alas, so we tend to see the world through a lens built in those time periods.

While in stress or not in a good mood, it is important to remember the Negativity Bias:

Due to survival reasons, our brain has evolved to weigh bad things 3x more than good ones.

So when you are having a problem, please have in mind that it is scientifically proven that it is not as bad as it looks.

(For additional biases, please see the next page)

SPEAKING OF BIASES - HERE ARE 10/50 TO KEEP IN MIND

Memory

Fundamental Attribution Error

We judge others on their personality or fundamental character, but we judge ourselves on the situation.



Sally is late to class; she's lazy. You're late to class; it was a bad morning.

Social

Self-Serving Bias

Our failures are situational, but our successes are our responsibility.



You won that award due to hard work rather than help or luck. Meanwhile, you failed a test because you hadn't gotten enough sleep.

Learning

In-Group Favoritism

We favor people who are in our in-group as opposed to an out-group.

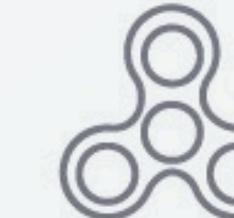


Francis is in your church, so you like Francis more than Sally.

Belief

Bandwagon Effect

Ideas, fads, and beliefs grow as more people adopt them.



Sally believes fidget spinners help her children. Francis does, too.

Money

Groupthink

Due to a desire for conformity and harmony in the group, we make irrational decisions, often to minimize conflict.



Sally wants to go get ice cream. Francis wants to shop for T-shirts. You suggest getting T-shirts with pictures of ice cream on them.

Politics

Halo Effect

If you see a person as having a positive trait, that positive impression will spill over into their other traits. (This also works for negative traits.)



"Taylor could never be mean; she's so cute!"

Moral Luck

Better moral standing happens due to a positive outcome; worse moral standing happens due to a negative outcome.



"X culture won X war because they were morally superior to the losers."

False Consensus

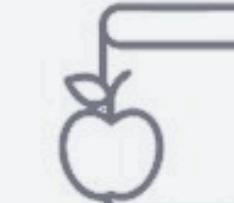
We believe more people agree with us than is actually the case.



"Everybody thinks that!"

Curse of Knowledge

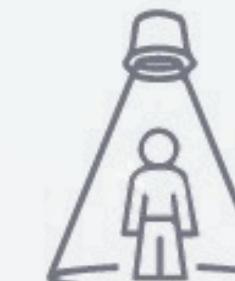
Once we know something, we assume everyone else knows it, too.



Alice is a teacher and struggles to understand the perspective of her new students.

Spotlight Effect

We overestimate how much people are paying attention to our behavior and appearance.



Sally is worried everyone's going to notice how lame her ice cream T-shirt is.

Availability Heuristic

We rely on immediate examples that come to mind while making judgments.



When trying to decide on which store to visit, you choose the one you most recently saw an ad for.

**Forer Effect
(aka Barnum Effect)**

We easily attribute our personalities to vague statements, even if they can apply to a wide range of people.



"This horoscope is so accurate!"

Defensive Attribution

As a witness who secretly fears being vulnerable to a serious mishap, we will blame the victim less and attacker more if we relate to the victim.



Sally sat too long at a green light because she was playing with her phone. She got rear-ended. Greg, who is known to text and drive, got out and yelled at the person who smacked into her.

Dunning-Kruger Effect

The less you know, the more confident you are. The more you know, the less confident you are.



Francis confidently assures the group that there's no kelp in ice cream. They do not work in the dairy industry.

Just-World Hypothesis

We tend to believe the world is just; therefore, we assume acts of injustice are deserved.



"Sally's purse was stolen because she was mean to Francis about their T-shirt and had bad karma."

Naïve Realism

We believe that we observe objective reality and that other people are irrational, uninformed, or biased.



"I see the world as it really is — other people are dumb."

Naïve Cynicism

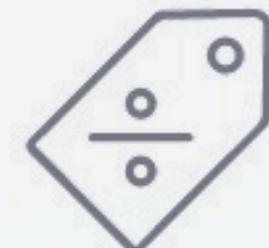
We believe that we observe objective reality and that other people have a higher egocentric bias than they actually do in their intentions/actions.



"The only reason this person is doing something nice is to get something out of me."

Anchoring

We rely heavily on the first piece of information introduced when making decisions.



"That's 50% off? It must be a great deal."

Automation Bias

We rely on automated systems, sometimes trusting too much in the automated correction of actually correct decisions.



Your phone auto-corrects "its" to "it's," so you assume it's right.

**Google Effect
(aka Digital Amnesia)**

We tend to forget information that's easily looked up in search engines.

Search



"What was the name of that actor in that funny movie? I've looked it up like eight times...."

Reactance

We do the opposite of what we're told, especially when we perceive threats to personal freedoms.



One of Alice's students refuses to do his homework, even though both she and his parents tell him to.

Confirmation Bias

We tend to find and remember information that confirms our perceptions.



You can confirm a conspiracy theory based on scant evidence while ignoring contrary evidence.

Backfire Effect

Disproving evidence sometimes has the unwarranted effect of confirming our beliefs.



The evidence that disproves your conspiracy theory was probably faked by the government.

Third-Person Effect

We believe that others are more affected by mass media consumption than we ourselves are.



"You've clearly been brainwashed by the media!"

Belief Bias

We judge an argument's strength not by how strongly it supports the conclusion but how plausible the conclusion is in our own minds.



Sally mentions her supporting theory about your conspiracy theory, which you adopt wholeheartedly despite the fact that she has very little evidence for it.

Availability Cascade

Tied to our need for social acceptance, collective beliefs gain more plausibility through public repetition.



A story about razor blades appearing in candy eventually led to many people no longer offering homemade treats on Halloween in America.

Declinism

We tend to romanticize the past and view the future negatively, believing that societies/institutions are by and large in decline.



"In my day, kids had more respect!"

Status Quo Bias

We tend to prefer things to stay the same; changes from the baseline are considered to be a loss.



Even though an app's terms of service invade Sally's privacy, she'd rather not switch to another app.

Sunk Cost Fallacy (aka Escalation of Commitment)

We invest more in things that have cost us something rather than altering our investments, even if we face negative outcomes.



"In for a penny, in for a pound!"

Gambler's Fallacy

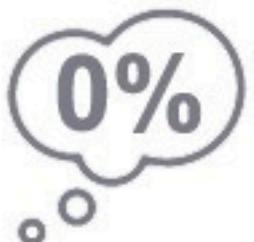
We think future possibilities are affected by past events.



Alice has lost nine coin tosses in a row, so she's sure to win the next one!

Zero-Risk Bias

We prefer to reduce small risks to zero, even if we can reduce more risk overall with another option.



"You should probably buy the warranty."

Placebo Effect*

If we believe a treatment will work, it often will have a small physiological effect.



Alice was given a placebo for her pain, and her pain decreased.

Framing Effect

We often draw different conclusions from the same information depending on how it's presented.



Alice hears that her favorite candidate is "killing it" with a 45% approval rating. Sally hears that the candidate is "disappointing the country" with a 45% rating. They have wildly different interpretations of the same statistic.

Stereotyping

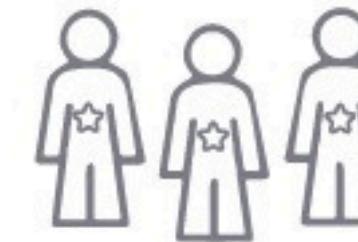
We adopt generalized beliefs that members of a group will have certain characteristics, despite not having information about the individual.



"That guy with the fancy mustache is a hipster. He probably has a vinyl collection."

Outgroup Homogeneity Bias

We perceive out-group members as homogeneous and our own in-groups as more diverse.



Alice is not a gamer, but she believes "all gamers are the same."

Authority Bias

We trust and are more often influenced by the opinions of authority figures.



"My teacher told me this was fine."

Survivorship Bias

We tend to focus on those things that survived a process and overlook ones that failed.



Greg tells Alice her purse business is going to be great because a successful fashion company had the same strategy. (But 10 other failed companies also had the same strategy.)

Tachypsychia

Our perceptions of time shift depending on trauma, drug use, and physical exertion.



"When the car almost hit me, time slowed down . . ."

Law of Triviality (aka "Bike-Shedding")

We give disproportionate weight to trivial issues, often while avoiding more complex issues.



Rather than figuring out how to help the homeless, a local city government spends a lot of time discussing putting in a bike path and bike sheds.

Zeigarnik Effect

We remember incomplete tasks more than completed ones.



Greg feels guilty for never getting anything done, until he sees all of the tasks he's checked off on his task list.

IKEA Effect

We place higher value on things we partially created ourselves.



"Don't you love this pot I spent \$20 on? I painted it myself!"

Ben Franklin Effect

We like doing favors; we are more likely to do another favor for someone if we've already done a favor for them than if we had received a favor from that person.



Greg loaned Francis a pen. When Francis asked to borrow \$5, Greg did it readily.

Bystander Effect*

The more other people are around, the less likely we are to help a victim.



In a crowd of students, no one called 911 when someone got hurt in a fight.

Suggestibility

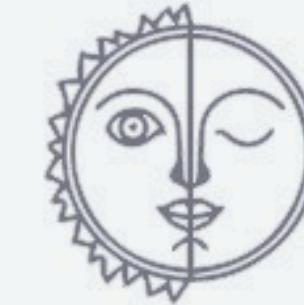
We, especially children, sometimes mistake ideas suggested by a questioner for memories.



"So did you fall off the couch before or after your mom hit you?"

False Memory

We mistake imagination for real memories.



Greg is certain Sally said a really funny joke about pineapples, when that joke actually came from a TV show.

Cryptomnesia

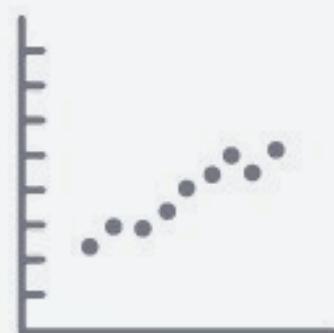
We mistake real memories for imagination.



Greg thinks he visited a graveyard, but he's pretty sure he just had a spooky dream.

Clustering Illusion

We find patterns and "clusters" in random data.



"That cloud looks like your cat, Alice!"

Pessimism Bias

We sometimes overestimate the likelihood of bad outcomes.



"Nothing will ever get better."

Optimism Bias

We sometimes are over-optimistic about good outcomes.



"It's going to turn out great!"

Blind Spot Bias

We don't think we have bias, and we see it in others more than ourselves.



"I am not biased!"

THANK YOU!

For Additional Details:

Book a Call:

<https://calendly.com/tiberiusdinu-neoteq>

Join The Waitlist:

<https://tibidinu1031.github.io/contactfromnew>

