



Survival Mode and ways to change it

HOUR 3

You are driving on a highway in stop and go traffic with the radio on...

- ▶ You see out of the corner of your eye a motorcycle driving between the rows of cars...

Reflexively

- Turn your head to see...
- Your pupils dilate...
- Your heart races...
- You are on hyper alert...



In a few moments you
recover

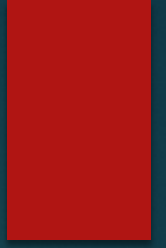
The motorcycle hits your child's arm sticking
out the window...you cannot get to where
you can pull over...the cyclist flips over the
hood of your car...

For months (years) following this incident

- Photophobia, headaches
- Blur, double vision
- Reading is difficult – words move on the page
- You have nightmares – you cannot get the image out of your head
- You are easily startled
- You cry at the drop of a hat – you get treated for depression
- You are crabby, angry
- You crave carbohydrates
- You cannot concentrate



You are injured in an accident and
long after your body is healed...

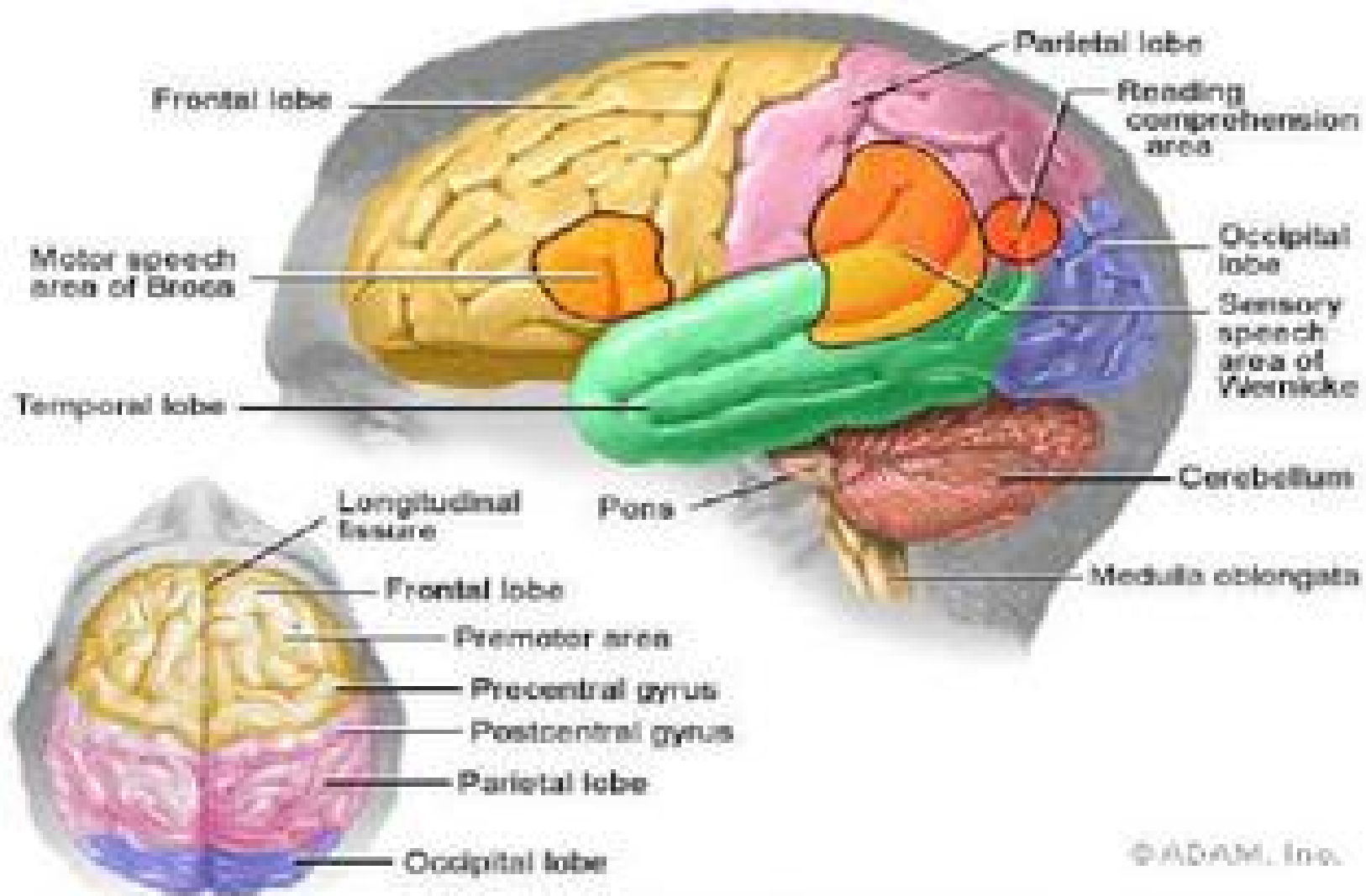


For Months or years

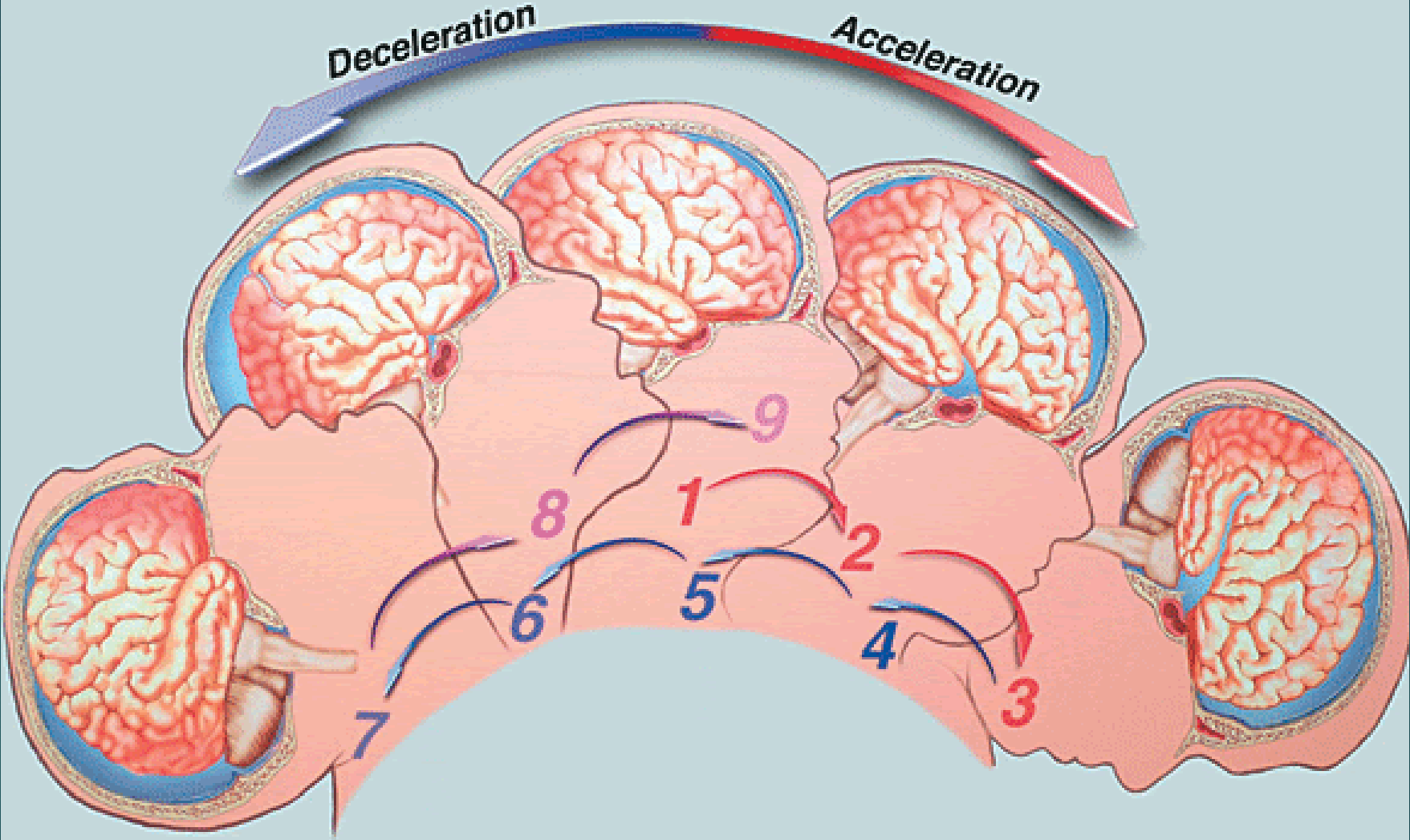
- You cannot concentrate
- You are easily startled
- You can't stand movies anymore and you used to love them
- You can't remember things you just did
- Lights bother you
- You have headaches
- The floor and words look like they swim
- Reading is impossible and you used to love it
- You cannot sleep for more than a few hours
- Your eyes are dry and tired



Traumatic Brain Injury (TBI) Facts



Mechanism of Closed Head Injury



Head thrown backward while brain hits front of skull

Head thrown forward while brain hits back of skull

Overlapping Symptoms



Possible Symptoms of TBI

- headaches
- dizziness/balance problems
- nausea
- sensitivity to light and sound
- vision changes
- impulsivity

- fatigue
- sleep problems
- trouble with memory and attention
- feeling depressed
- feeling anxious
- irritability

Possible Symptoms of PTSD

- on high alert
- startled easily
- fearfulness
- flashbacks
- nightmares
- guilty feelings
- avoidance
- numbness
- self-destructive behavior

HEALTHY

- Frontal:
Concentration, Problem Solving, Speech
- Parietal:
Sense of Touch, Pain, Temperature
- Occipital:
Healthy Vision
- Temporal:
Memory, Organization
- Cerebellum:
Balance & Coordination
- Brainstem:
Breathing, Steady Heart



TBI

- Frontal:
Lack of Focus, Irritability, Language Difficulty
- Parietal:
Difficulty with Reading, Spatial Misperception
- Occipital:
Blind Spots, Blurred Vision
- Temporal:
Problems with Short- & Long-Term Memory
- Cerebellum:
Difficulty Walking, Slurred Speech
- Brainstem:
Changes in Breath, Difficulty Swallowing

Vision on automatic: the state I am in based on acute survival

- ▶ Pupil size - dilates to let more light in (Photophobia)
- ▶ Focus – suppressed focal system, accommodation, edge detection(blur)
- ▶ Tear film – decreased to conserve water (dry eyes, blur, photophobia)
- ▶ Eye posture – divergent to take in more of the field (Diplopia, images appear to move)
- ▶ Attention shift to ground – what enters my space and what leaves it increased awareness of motion (Sensory overwhelm, dizziness)

Vision on automatic: chronic state of (perceived) alarm

- ▶ Pupil size – constriction is unstable Alpha Omega Pupil (photophobia)
- ▶ Focus – able to do for brief periods then releases to ground (Blur, myopic or astigmatism shift, fatigue)
- ▶ Tear film – decreased to conserve water (dry eyes, blur, photophobia)
- ▶ Eye posture – divergent to take in more of the field (Diplopia, images appear to move, fatigue)
- ▶ Attention shift to ground – what enters my space and what leaves it increased awareness of motion (Constricted functional field, Sensory overwhelm, dizziness, fatigue, overwhelm)

Survival Mode

- ▶ Eyes diverged
- ▶ Pupils large
- ▶ Sensitive to background motion and sound
- ▶ Energy saving mode
- ▶ Conserve water

Overwhelm is a cliff – not a slide

Don't go over the cliff in the training room!

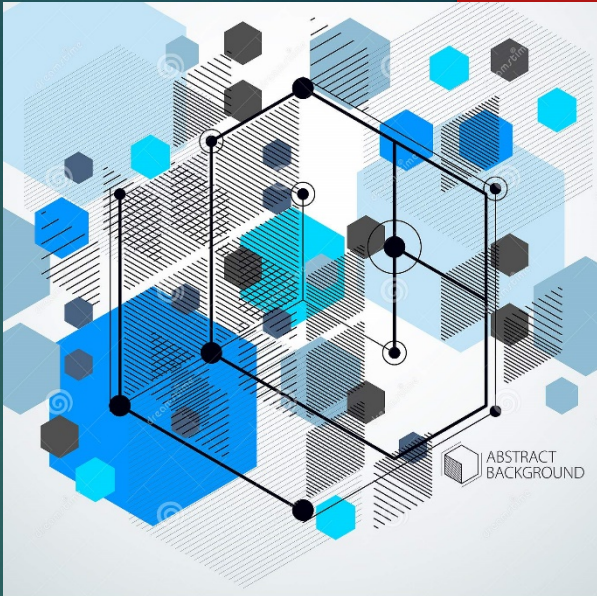
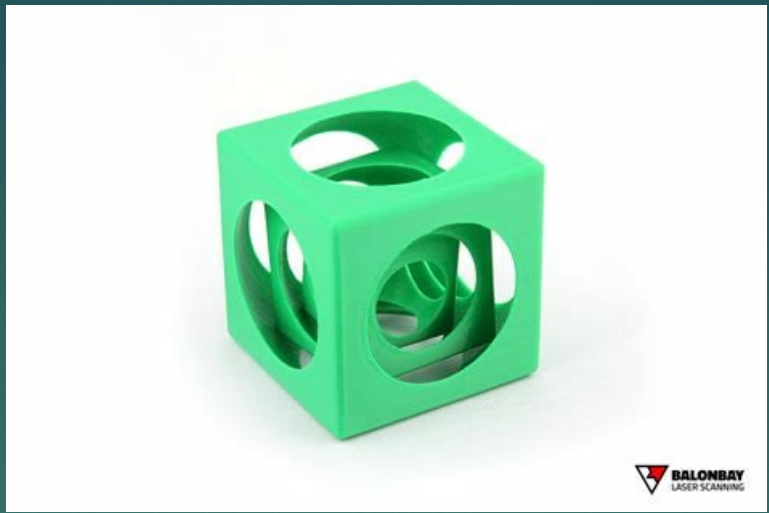
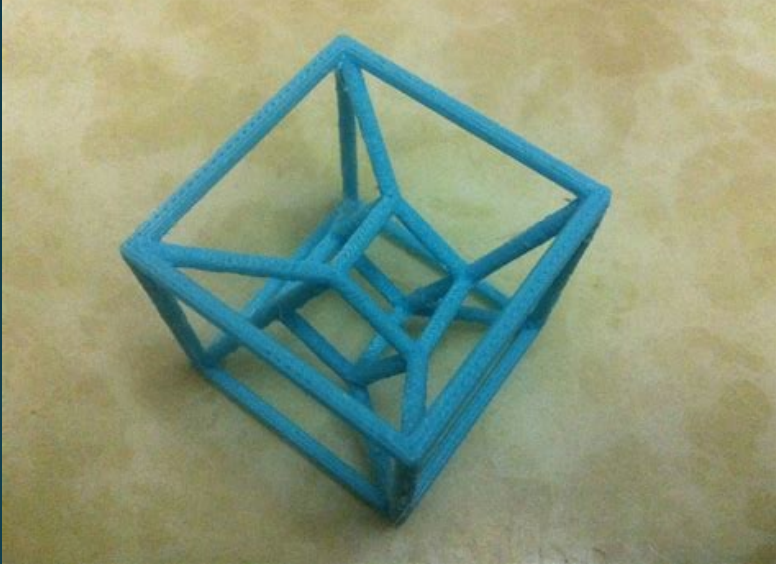


Survival mode: Primitive and Neonatal Reflexes how we are wired

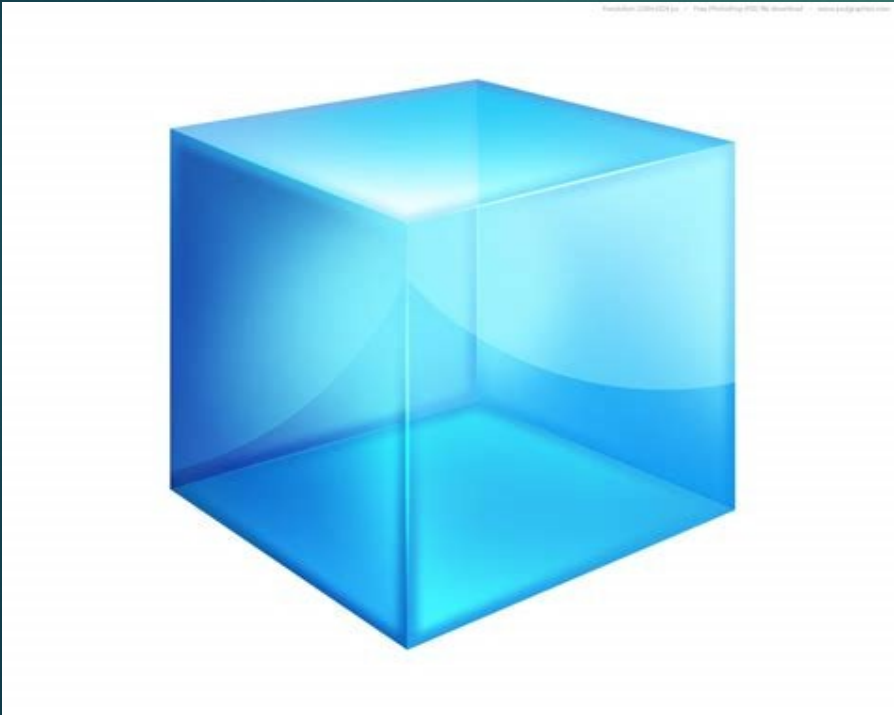
- ▶ Controlled by the primitive brain which is completely automatic
- ▶ Responds to the environment

Integrate as higher centers in the brain develop and inhibit the reflex

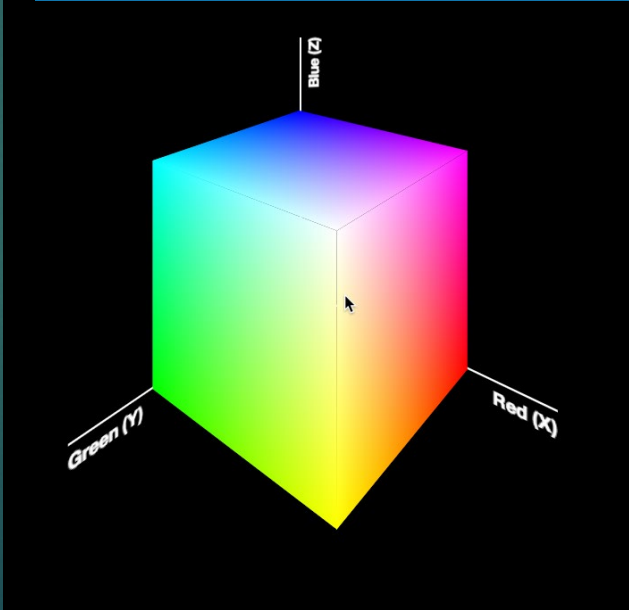
- ▶ Should not be present past infancy
- ▶ If they persist then a reflexive response is triggered when it shouldn't be
- ▶ The higher centers influence learning, memory, language, vision, behavioral control, motor development (fine and gross motor), and balance and coordination.
- ▶ Not out topic today but worth pursuit



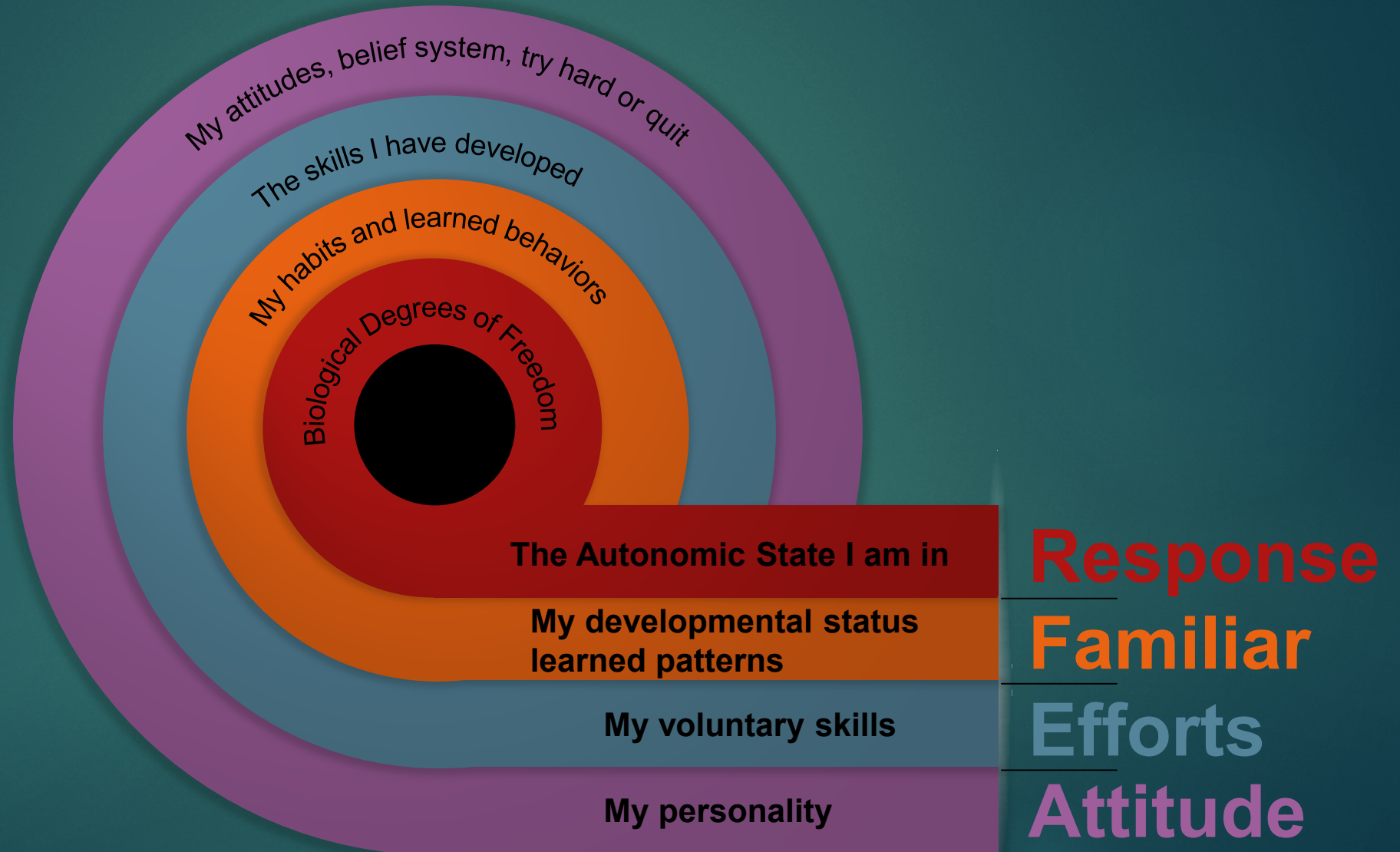
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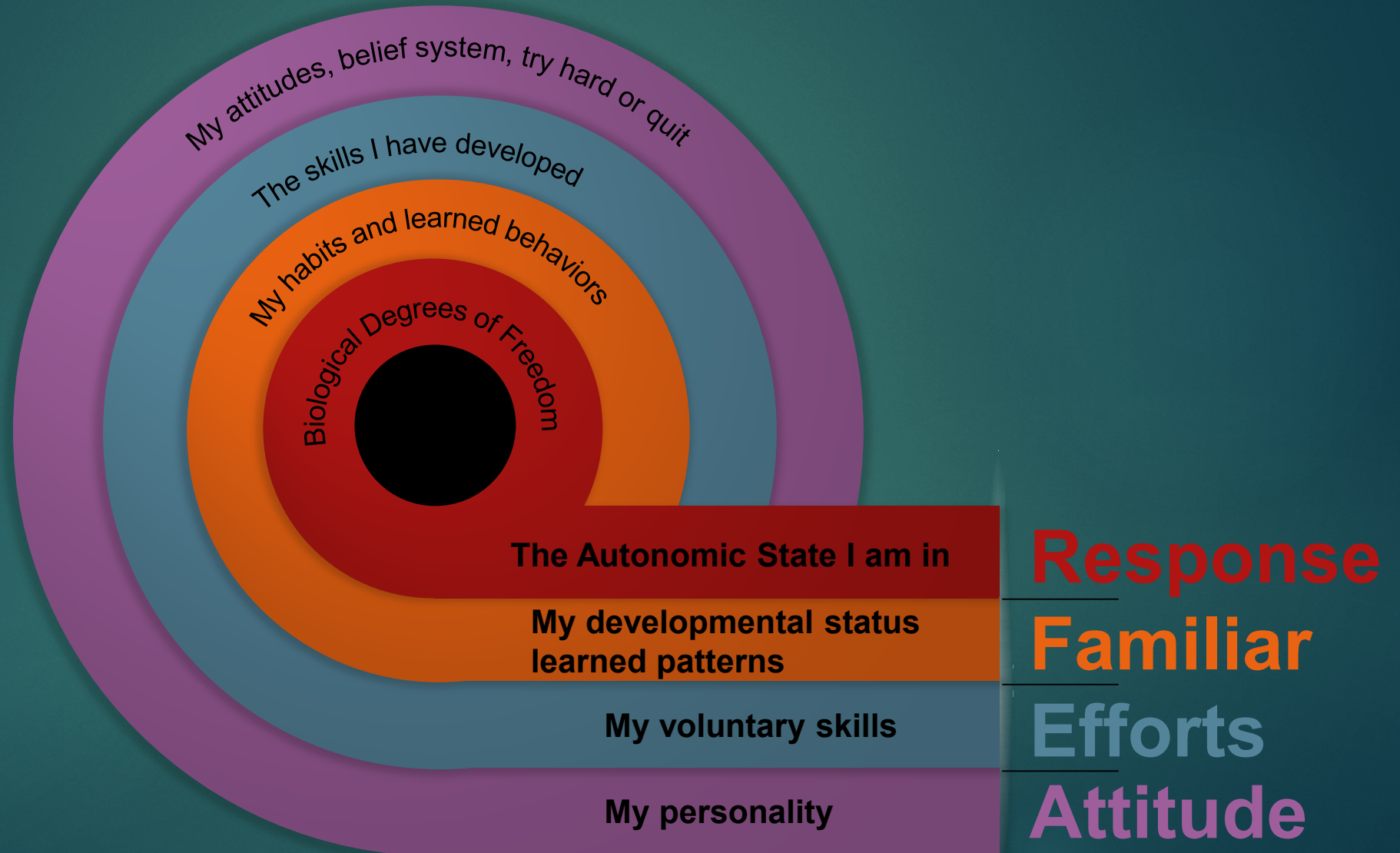
Need to think multiple dimensionally



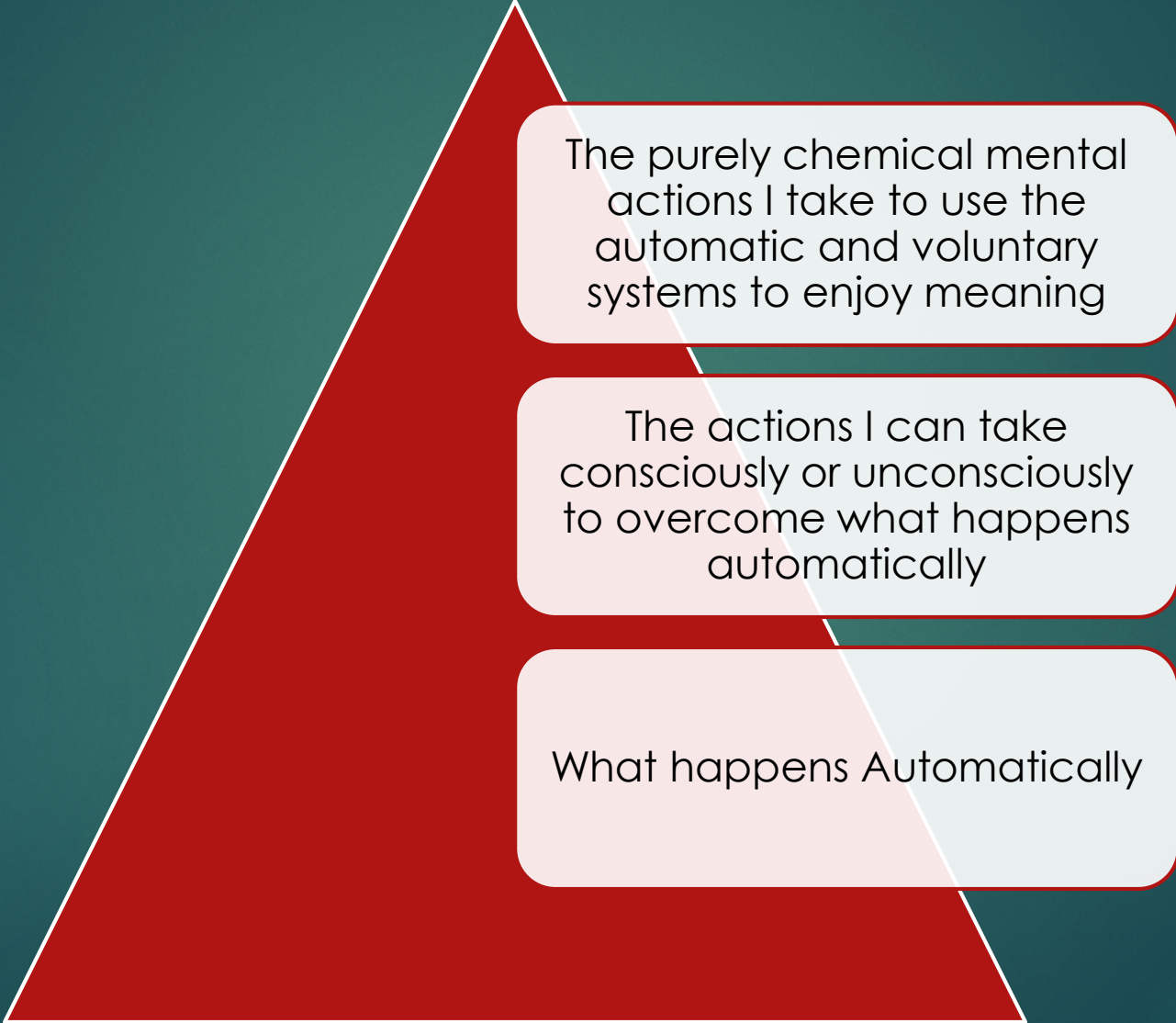
How we operate



How we operate poorly vs well?



The state I am in



The purely chemical mental actions I take to use the automatic and voluntary systems to enjoy meaning

The actions I can take consciously or unconsciously to overcome what happens automatically

What happens Automatically

Vision at the level of voluntary: the things I do

- ▶ Direct my attention to a target
- ▶ Attention shift to detail

If I am in survival mode, I can override for a short time, but then I will fatigue

To get out of survival mode

relative base IN

relative low amounts of plus lenses

dim environment

Blue end or violet or magenta or combination